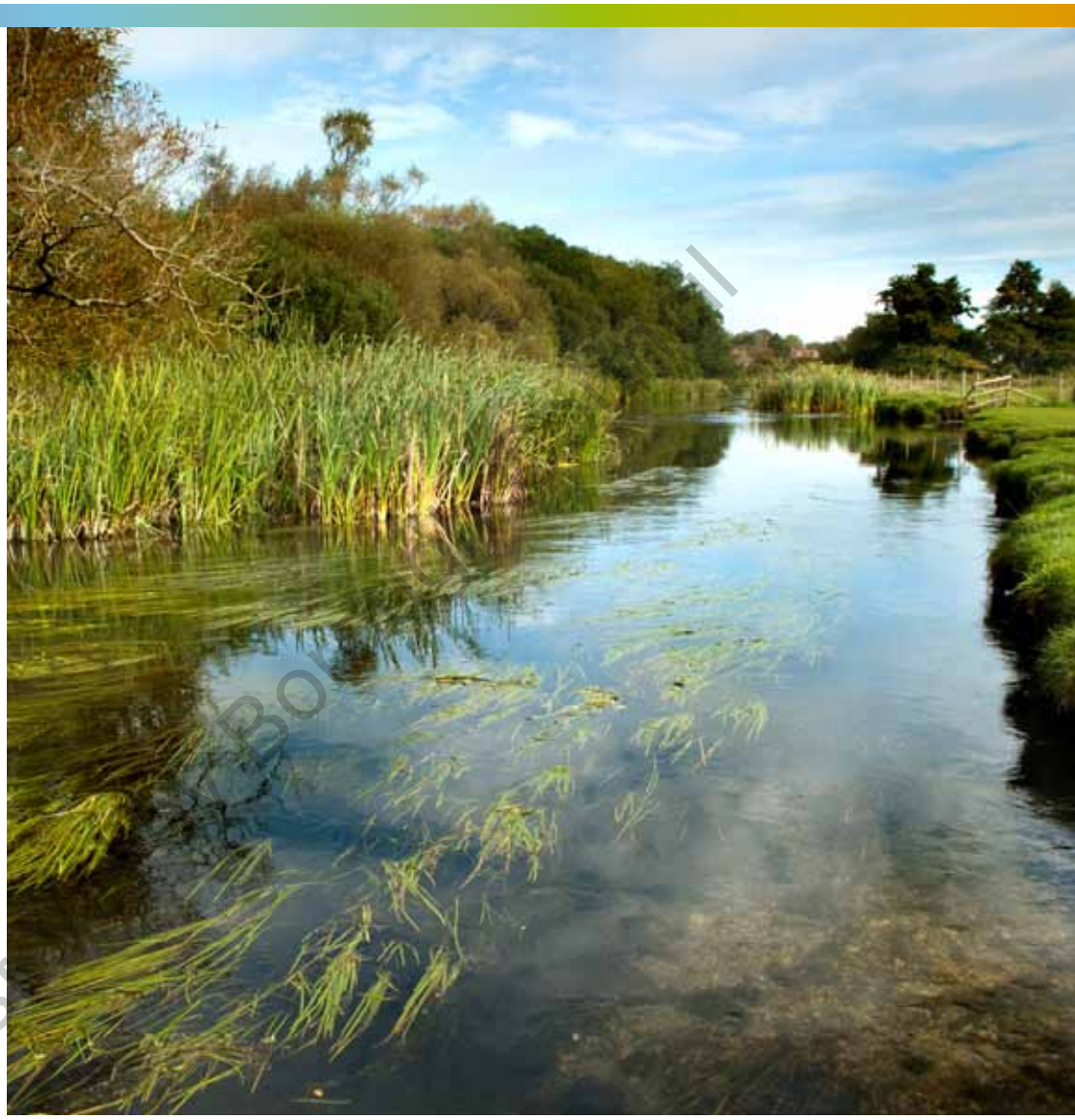
Habitat Regulations Assessment

for Revised Local Plan DPD 2011 – 2029

Regulation 19 - Pre Submission

Main Report

November 2013



Test Valley Borough Council

Commenting on this Document

This Habitat Regulations Assessment report has been published alongside the Revised Local Plan consultation document, with both subject to public consultation from 24th January to 4.30pm on 7th March 2014. Only representations made within this period will be taken into account.

This document is available for inspection at the Council's Andover and Romsey offices during normal office hours. It is also available on the Council's website at http://www.testvalley.gov.uk/resident/planningandbuildingcontrol/planningpolicy/local-development-framework/habitat-regulations-assessment/.

If you would like to comment on this document please send your views to the address below or the email address. You can also comment via the Council's website.

Your correspondence will be available for public inspection and for copying in accordance with the provisions of the Access to Information Act.

Should you have any questions please contact the Planning Policy team.

Planning Policy
Test Valley Borough Council
Beech Hurst
Weyhill Road
Andover
SP10 3AJ

T: 01264 368000
W: www.testvalley.gov.uk/ldf
E: ldf@testvalley.gov.uk

Executive Summary

This report explains the process and findings of the screening and assessment that has been undertaken for the Habitats Regulations Assessment of the Test Valley Borough Revised Local Plan DPD. It has been prepared in order to fulfil the Council's duties under Article 6(3) of the EU Habitats Directive, which requires that any plan, which is not directly connected with or necessary to the management of a European site, but would be likely to have a significant effect on such a site, either individually or in combination with other plans or projects, shall be subject to an 'appropriate assessment' of its implications for the European site in view of the site's conservation objectives. The plan-making body shall agree to the plan only after having ascertained that it will not adversely affect the integrity of the site concerned.

Internationally protected sites include those protected under European legislation (Special Protection Areas and Special Areas of Conservation) plus sites listed as wetlands of international importance under the Ramsar Convention.

Using a method that reflects current best practice and advice from Natural England, the assessment screens the policies and finds that 41 policies are not likely to have significant effects alone or in-combination as they do not give rise to effects that could affect an International site.

Two policies (COM1 and LHW2) are assessed as having a likely significant effect on their own, while nine policies (COM1, COM3, COM4, COM5, LE3, LE4, LE5, LE6 and T3) are assessed identified as having a likely significant effect when considered in-combination with other plans or projects. One policy (COM1) was identified as having a likely significant effect either alone or in combination, depending on the effect under consideration.

Detailed assessment of the effects of these policies found that, with three exceptions, the effects of the plan would not undermine the conservation objectives of any sites of International nature conservation importance. However, there was a lack of certainty over the success of proposed counteracting measures with respect to COM1, COM3 and COM4.

Further detailed assessment of the implications of the policies on the conservation objectives of the designated sites was carried out, together with a more detailed exploration of potential counteracting measures in this context. It was demonstrated that the Plan would not provide support for proposals under COM1, COM3 and COM4 where these could not demonstrate that such projects would not adversely affect International sites.

It was also not possible to rule out adverse effects on Mottisfont Bats SAC from the impacts of constructing new residential development through the implementation of Policy COM1. Consequently, additional wording is now included in the Revised Local Plan DPD to counteract these effects through demonstrating how support for proposals could not stem from the Plan where such proposals could not demonstrate that they would not adversely affect the SAC.

In conclusion, it is demonstrated that the Revised Local Plan DPD will not adversely affect any sites of International importance for nature conservation.

Contents

1 Introduction

1.1 The Council is preparing a Local Development Framework to set out a long term strategy to manage development over the period from 2011 to 2029. This Habitat Regulations Assessment (HRA) Report has been prepared on behalf of Test Valley Borough Council to assist the preparation of the Revised Local Plan DPD[1], which forms part of the Local Development Framework.

1.2 Over the plan period, the Borough will need to make provision for development, including for residential and economic purposes. The Local Plan will identify the appropriate levels of development and identify allocations in order to facilitate delivery. It will also include a number of policies to support the determination of planning applications on a range of matters, including social, economic and environmental issues. This also includes the identification of settlement boundaries.

1.3 The Revised Local Plan DPD covers all of the area of Test Valley for which the Borough Council is responsible for planning purposes – this excludes a small area in the south west of the Borough which forms part of the New Forest National Park.

1.4 This report should be read in conjunction with the Revised Local Plan DPD Regulation 19 consultation document (available via the Council's website).

The Habitats Regulations

1.5 The Conservation of Habitats and Species Regulations 2010 (as amended), commonly referred to as the 'Habitats Regulations' transpose two pieces of European law – Directive 2009/147/EC on the conservation of wild birds (the Birds Directive) and Directive 92/43/EEC on the conservation of natural habitats and of wild fauna (the Habitats Directive) – into domestic law.

1.6 Article 6(3) of the Habitats Directive requires that:

- any plan, which is not directly connected with or necessary to the management of a **European site**,
- but would be likely to have a significant effect on such a site,
- either **individually or in combination** with other plans or projects,
- shall be subject to an '**appropriate assessment**' of its implications for the European site
- in view of the site's **conservation objectives**.
- The plan-making body shall agree to the plan only after having ascertained that it will not **adversely affect the integrity of the site** concerned, unless in exceptional circumstances, the provisions of Article 6(4) are met.

1.7 A brief explanation of the highlighted terms is set out below:

[1] Development Plan Document

International sites

1.8 Sites which are to be considered in the appraisal process include Special Protection Areas (SPAs), classified under the EU Birds Directive and Special Areas of Conservation (SACs), designated under the EU Habitats Directive. 'Potential' or 'Possible' SACs (pSACs), 'Candidate' SACs (cSACs) and 'Potential' SPAs (pSPAs) (i.e. sites that have yet to be formally classified as SPAs or designated as SACs but are proposed as such) are also considered as European sites. However, there are no such pSACs, cSACs or pSPAs in Test Valley.

1.9 A number of areas of internationally important wetland habitat are recognised under the Ramsar Convention. Ramsar sites are listed for particular wetland habitats and, in the UK, overlie SPA classifications and SAC designations. The criteria for listing a site as a Ramsar site are different to those used for SPAs and SACs, but the Ramsar criteria are of equal importance for the ecological functioning and integrity of the relevant site. National guidance requires that Ramsar sites are also assessed[2], [3] within HRA of plans.

1.10 Taken together, SPAs, SACs (and pSACs, cSACs and pSPAs) form the Natura 2000 network. For the purposes of this report, the Natura 2000 sites considered in the assessment, together with Ramsar sites, are collectively referred to as **International sites**. Additionally, while (as discussed in paragraph 1.8) the terminology relating to the *designation*, *classification* or *listing* of an International site varies depending on whether it is an SPA, SAC or Ramsar site, for the purposes of this report, '*designations'* and '*designated'* will be used to refer collectively to these terms.

Likely significant effect

1.11 The first part of the process requires the authority to identify whether a plan (either as a whole, or any of its component parts such as specific policies) is ***likely*** to have a *significant* effect on any such site.

Effect

1.12 It is therefore apparent that the first task is to identify the effects that could flow from the implementation of the plan, and how they might affect any given International site. This is detailed in Chapter 2.

Significance

1.13 Where a plan, either alone or in combination with other plans or projects, could undermine the site's *conservation objectives* (see below), the effects on the site must be considered to be significant. The relevant consideration is the potential effect on the ecological functioning of the site, rather than consideration solely on proportion or area of the habitats or species affected on a site.

[2] ODPM (2005), *Circular 06/2005: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System*
[3] DCLG (2012), *National Planning Policy Framework* (see paragraph 118)

Likelihood

1.14 A likely effect is one that cannot be ruled out on the basis of objective information. Ordinarily, '*likely*' might be considered to mean that an effect is *probable* or *might well happen*. However, the Waddenzee case (ECJC-127/02) in the European Court ruled that a project should be the subject of an appropriate assessment:

'if it cannot be excluded, on the basis of objective information that it will have a significant effect on the site either individually or in combination with other plans and projects'.

1.15 While this definition was given in relation to a specific case regarding a 'project' rather than a 'plan', the legislation covers both plans and projects and thus the definition should be seen as being relevant to all assessments undertaken under the Habitats Regulations with respect to 'likelihood'.

Alone or in-combination

1.16 In some cases, the plan or one of its elements (policies) may have a likely significant effect on its own merits. It must be recognised however that in some cases, the effects of a plan (or one of its components) on its own would be either unlikely or insignificant, but that there may be a number of plans or projects (each of which would be unlikely to have a significant effect alone), which may be likely to have a significant effect if their individual effects were to be added together, by them all coming forward over time.

Appropriate Assessment

1.17 Where the initial consideration of the plan (and its elements), together with the in-combination assessment, cannot 'screen out' likely significant effect(s) on International site(s) (i.e. it cannot be ruled out that the plan would not undermine a site's conservation objectives) then further assessment is necessary. This is called the 'appropriate' assessment, meaning that while there is no formal method for carrying out this, it must be properly focussed, fit for purpose, legally compliant and proportionate.

Conservation objectives

1.18 Natural England has set out objectives for each European site, which define what constitutes favourable *conservation status* (see below) of each feature that qualifies the site as a SAC or SPA (included in the designation as a 'primary feature') and describes broad targets which should be met if the feature is to be judged favourable. These vary across the sites but typically state that the objectives are to avoid the deterioration of the qualifying natural habitats and the habitats of qualifying species, and the significant disturbance of those qualifying species, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving Favourable Conservation Status of each of the qualifying features. The aims (subject to natural change) are generally to maintain or restore:

- the extent and distribution of qualifying natural habitats and habitats of qualifying species,
- the structure and function (including typical species) of qualifying natural habitats and habitats of qualifying species,
- the supporting processes on which qualifying natural habitats and habitats of qualifying species rely,
- the populations of qualifying species and
- the distribution of qualifying species within the site.

1.19 Ramsar sites in themselves do not have defined conservation objectives. However, there is strong correlation between Ramsar qualifying criteria and SAC / SPA qualifying features. Where there is an overlap between designations, the conservation objectives for the European designations are designed to incorporate the Ramsar features.

Conservation status

1.20 Conservation status is defined as '*the sum of the influences acting on a natural habitat and its typical species that may affect its long-term natural distribution, structure and functions as well as the long-term survival of its typical species*'. The conservation status of a site is favourable when '*its natural range and areas it covers within that range are stable or increasing; the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future; and the conservation status of its typical species is favourable*'.

1.21 It is important to consider the relationship between International sites and Sites of Special Scientific Interest (SSSIs). International site boundaries typically overlie component SSSIs. The underlying SSSIs are assessed on the basis of their *condition*, whereas SACs are assessed on the basis of their *conservation status*. The condition of a SSSI (or component unit) is an assessment of the site at a fixed moment in time, for instance based on quadrat surveys of plant species present to determine if the SSSI designation is meeting its conservation objectives, typically based on extent and composition of habitats and species. The final assessment is made reference to historic condition assessments, which therefore sometimes lead to assessments of 'recovering' or 'declining'.

1.22 Assessment of conservation status for International sites does also require this type of assessment; however, as discussed in paragraph 1.21, conservation status needs to go further and include an assessment of *the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future.* These structures and functions will not and cannot be identified during a SSSI condition assessment.

Site integrity

1.23 Site integrity is defined as "*the coherence of its ecological structure and function, across its whole area, which enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified*"[4].

Adverse effect on site integrity

1.24 An adverse effect on site integrity would be one that (directly or indirectly) affects the site's qualifying features resulting in harm to the ecological structure and functioning of the site, its supporting processes and / or adversely affects the site's ability to meet conservation objectives (i.e. maintaining or restoring site integrity).

1.25 The following chapter sets out the method by which Test Valley Borough Council has carried out this assessment.

[4] ODPM (2005) Circular 06/2005: Biodiversity and Geological Conservation – Statutory obligations and their impact within the planning system.

2 Methodology

2.1 There is no fully defined way in which HRA must be carried out. Each land use plan is different and requires a decision about how to undertake the HRA of that plan – for example, the information required and any assumptions that need to be made. The method and level of detail will vary with the scale and geographic area of the plan, the nature of its policies, and how sites may be affected. The Department for Communities and Local Government (DCLG) (2006)[5] does however set out a methodology, while Tydelsley for Natural England (2009) (draft)[6] sets out to complement that guidance. The Council has used these documents in carrying out the HRA of the Local Plan.

2.2 Additionally, the Council has referred to and used where necessary, guidance produced by the European Commission[7]. The steps followed by the Council in carrying out the HRA thus far are as follows:

Table 2.1 – Stages of the HRA process

HRA Stage (DCLG)	Elements of that stage (adapted from Tyldesley / NE)
Stage 1 (*AA1*) – Screening for likely significant effect	**1)** Gather the evidence base about international sites, their vulnerabilities and the effects that could act upon International sites (**Chapter 3** of this document). **2)** Screen the policies in the Plan for likelihood of significant effect on International sites (**Chapter 3**). **3)** Introduce measures to avoid likely significant effect by amending relevant policies (where possible). **4)** Consult Natural England on the findings of the screening stage, and scope of the Appropriate Assessment.
Stage 2 (*AA2*) – Appropriate Assessment, and ascertaining the effects on the integrity of International sites	**5)** Appropriate Assessment of policies identified in AA1 as being likely to have significant effects on an International site and where those effects could not be removed at AA1 (screening) stage (**Chapter 4 - 9**). **6)** Amend the plan / option or take other action to avoid any adverse effect on integrity of International site(s).
Stage 3 (*AA3*) – Mitigation measures and alternative solutions	**7)** Assess additions and changes to the plan and prepare draft HRA record **8)** Complete the draft Appropriate Assessment and draft HRA record

[5] DCLG (2006) Planning for the protection of European Sites: Appropriate Assessment
[6] Tyldesley, D. (2009) *The Habitats Regulations Assessment of Local Development Documents Revised Draft Guidance for Natural England* Natural England, Sheffield.
[7] European Commission (2001) *Assessment of plans and projects significantly affecting Natura 2000 sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*

2.3 The findings of Stage 1 (Screening) are set out in Chapter 3. This:

- identifies the geographical scope of the assessment;
- identifies the particular characteristics of the International sites within that area, and
- considers the ways in which the plan or its elements may affect those sites.

2.4 Screening was initially carried out for the Core Strategy DPD and Designation DPD at Regulation 25 stage (January 2012). However, it is appropriate that earlier iterations of the screening assessment can be superseded upon more detailed analysis during subsequent revisions of the HRA, often where subsequent iterations of the Plan policies change or new data leads to a more developed understanding of the way in which a policy and its effects can affect an International site.

2.5 To further inform the HRA, TVBC re-examined the Regulation 25 findings (Stage 1), undertaking a thorough review of the existing evidence base to ensure that there was enough information to carry out the HRA[8]. This process also helped identify data gaps and gave an understanding of where areas of uncertainty (such as those described below, paragraphs 2.10 to 2.22) might be reduced or eliminated.

2.6 The stages in the Council's development of the evidence base for the HRA are as follows:

A) Identification of geographic scope of the HRA and those sites potentially affected by the plan, giving a description of the International sites identified based on the following characteristics:

- summary description of the International interest features;
- current condition of the qualifying features;
- conservation objectives and management proposals for these sites and current and planned nature conservation activities.

B) Identification of the vulnerabilities of and hazards to the special interest features identified in A), detailing:

- impact identification;
- impact pathway identification;
- consideration of zones of influence /boundaries.

C) Identification of potential changes to baseline condition in the International sites under a 'no development scenario' for Test Valley Borough Council.

2.7 The HRA process – and particularly Stages 2 and 3 – need to be carried out iteratively, and along the same timescales as the Plan itself, to ensure that each process (Plan and HRA) informs subsequent iterations of the overall process.

[8] Green Dimensions (2012) *Habitat Regulation Assessment of the Test Valley Local Development Plan: Baseline Ecological Information and Identification of Potential Effects.*

2.8 In addition, the Sustainability Appraisal (SA) of the Plan has been carried out parallel to the HRA, ensuring that there is consistency between the two processes.

2.9 Judgements will always need to be made regarding the selection of a suitable method selected for assessing any such plan. Natural England (NE) have been engaged with throughout the early stages of plan preparation and HRA process and have provided valuable input on the appropriate methods, scale and level of detail. Such judgements will often, as is the case with Test Valley Borough Council, need to be guided in part by limitations in available information – both currently available, and what might reasonably and practicably be gathered during the Plan and HRA process. Such limitations are explained below and considered in detail where necessary within the Appropriate Assessment sections (Chapters 4-10).

Limitations and uncertainty

2.10 Tyldesley (2009) for Natural England usefully sets out guidance for dealing with uncertainty. This is set out below for reference, and the discussions in Chapter 4 (Appropriate Assessment) will apply these as necessary and as described and justified in the relevant sections.

Scientific

2.11 Scientific uncertainty usually arises owing to uncertainty about the predicted effects of one or more aspect of a plan on the interest features of an International site. Scientific uncertainty may be due to a lack of scientific know-how, or a lack of ecological information, or inadequate or out-of-date scientific data. It may also occur where the assessor is unable to satisfactorily predict and estimate the nature, scale or spatial extent of changes proposed by the plan.

2.12 In accordance with the Habitats Directive and Regulations, wherever scientific uncertainty is encountered a precautionary approach should be adopted. If in doubt, further assessment should be undertaken and the worst outcome assumed.

Regulatory

2.13 Some local development documents will include references to proposals that are planned and implemented through other planning and regulatory regimes, for example motorway improvements. These will be included because they have important implications for spatial planning, but they are not proposals of the LPA, nor are they proposals brought forward by the plan itself. Their potential effects will be assessed through other procedures.

2.14 There is a need to focus the Habitats Regulations Assessment of the Local Plan on the strategy, policies and proposals directly promoted by the Plan, not every proposal for development and change, especially where these are planned and regulated through other statutory procedures which will be subject to a Habitats Regulations Assessment.

2.15 The LPA may not be able to assess the effects of these proposals and it may be inappropriate for them to do so, resulting in unnecessary duplication. That said, the

possible effects of such proposals, in combination with the Plan may be relevant and where necessary, these are considered.

Planning Hierarchy

2.16 Higher level strategic plans such as the Test Valley Borough Revised Local Plan will have more general and strategic provisions. Therefore its effects are more uncertain. The protective regime of the Directive is intended to operate at differing levels. In some circumstances assessment at a lower tier in the planning hierarchy will be more effective in assessing the potential effects of a proposal on a particular site and protecting its integrity.

2.17 However, it is only appropriate to consider relying on the Habitats Regulations Assessments of lower tier plans where the HRA of the Local Plan cannot reasonably assess the effects on an International site in a meaningful way. Conversely, the lower-tier plan can identify more precisely the nature, scale or location of development, and thus its potential effects. Therefore, HRA of proposal at a lower level (e.g. a site-specific SPD) will be able to change the proposal if an adverse effect on site integrity cannot be ruled out, because the lower tier plan is free to change the nature and/or scale and/or location of the proposal in order to avoid adverse effects on the integrity of any International site (e.g. it is not constrained by location specific policies in a higher tier plan). Additionally, the HRA of the plan or project at the lower tier is required as a matter of law and policy.

2.18 It is however seen as relevant and important for the HRA of the higher tier plan to indicate what further assessment may be necessary in the lower tier plan and how the requirements may be adjusted, in the event that the HRA of the lower tier plan shows that adverse effects on an International site could not be ruled out.

2.19 Because the higher tier plans are more uncertain, and may possibly rely on unrealistic assumptions about the effects on International sites in lower tier assessments, it is however important to adopt a precautionary approach. If adverse effects on International sites could occur as a result of the amount or location of development to be provided for within the higher tier plan, it is necessary to make every effort – given acknowledged limitations and constraints where fully justified - to adapt the higher tier plan to avoid such effects in any case.

Implementation uncertainty

2.20 In many situations, the effects arising from a plan depend on how that plan is implemented. To ensure compliance with the Regulations, it may be appropriate to impose a caveat in relevant policies, or introduce a free-standing policy, which states that any development project that could have an adverse effect on the integrity of an International site will not be in accordance with the plan.

2.21 This would help to enable stakeholders to reasonably conclude, on the basis of objective information, that even where there are different ways of implementing a plan, and even applying the precautionary principle, no element of the plan that could adversely affect the integrity of an International site could be seen as being supported by the plan.

2.22 It is however not sufficient for the HRA to conclude no significant effects, merely because the plan contains a policy protecting internationally designated sites. Any policy introduced to remove uncertainty must be targeted specifically to deal with the issue that is causing the uncertainty. In assessing the effects on International sites the HRA should assess the overall scale, location, timing and nature of new development. It should assess whether delivery of that development in the timescale of the plan, and the implementation of all its policies and proposals, would be likely to have a significant effect on an International site, alone or in combination with other plans or projects.

Precautionary nature of the 'likely significant effects' test

2.23 The decision-making process under the Habitats Directive is underpinned by the precautionary principle, whereby the local planning authority, as Competent Authority acts to avoid potential harm in the face of scientific uncertainty. If it is not possible in a 'likely significant effect' test (see Chapter 3) to rule out a significant effect on an International site *on the basis of available evidence,* then it should be assumed the significant effect identified is likely to occur as a result of the Plan and needs to be dealt with at the next stage of Habitat Regulation Assessment. This precautionary approach should be taken at all stages of the assessment where faced with uncertainty.

3 Screening for Likely Significant Effects

3.1 The following sections of the Screening stage summarise the evidence base used to carry out the screening, sets out the findings and discusses these to demonstrate how the conclusions on likely significant effect were arrived at.

Identification of geographical scope

3.2 There are a number of International sites either wholly or partially within Test Valley Borough, while further sites lie outside the Borough, but may still be affected by the Plan. This would be through particular impact pathways, dependent on the sensitivities of the particular sites and the nature of the likely effects. There are a number of areas of land outside particular International sites and within either the plan area or the zone of influence of the plan, which are ecologically linked to a particular International site and where impacts arising from the Plan acting on these areas may consequently affect International sites. One particular example within Test Valley is Mottisfont Bats SAC – although in itself this is a well-defined area of ancient woodland that supports a maternity colony of barbastelle bats, this is a wide-ranging species and processes that adversely affect key bat foraging and commuting habitat several kilometres outside the SAC boundary can potentially have an adverse effect on the SAC itself through these processes fragmenting or interrupting these resources – and thus undermining the conservation objectives of the SAC.

3.3 Best practice has been to consider all International nature conservation sites and Ramsar sites within the area of coverage of the Plan, together with all those within a 10 kilometre buffer as potential receptors for negative effects. The designated sites that fall within these criteria are listed in Table 3.1.

Table 3.1 – International sites within 10km of Test Valley

Nature conservation site	Designation		
	SAC	SPA	Ramsar
- Sites within or partially within Test Valley			
Emer Bog	✓		
Mottisfont Bats	✓		
New Forest	✓	✓	✓
Porton Down	✓	✓	
Salisbury Plain	✓	✓	
Solent Maritime	✓		
Solent and Southampton Water		✓	✓

Nature conservation site	Designation		
	SAC	SPA	Ramsar
- Sites wholly outside the Borough but within 10 kilometres			
Kennet and Lambourn Floodplain	✓		
Kennet Valley Alderwoods	✓		
River Avon	✓		
River Itchen	✓		

Potential effects of the Plan

3.4 The International sites within the zone of influence of the Plan are vulnerable to a range of effects. The implementation of the Plan can have a significant effect on an International site for a range of reasons, as follows:

Nature, quantity and location of changes to the environment

3.5 While land use plans themselves will not adversely affect any International site, they can – through implementation of policies within it – result in a change to the environment to the extent that an International site is adversely affected through one or more of the pathways identified above. For the majority of cases this will depend on the **location** and **magnitude** of the change resulting from the Plan. It is rare for a land use plan to contain a policy that would result in adverse impact to a site *irrespective* of where that change took place or at what scale.

3.6 Location and magnitude are often inter-related, in that the amount of change could be more or less likely to cause a significant effect depending on its location, for example, an increase in housing flowing from the implementation of the plan. A given level of increase in housing may have a significant effect if those houses are all located close to an International site, but may not if located further away.

3.7 A policy may have direct or indirect effects on an International site – for example a policy that steers potentially damaging activity towards an International site would have direct effects, while a policy for residential development that does not steer development towards the site, but might result in more people visiting a sensitive area could be said to have indirect effects.

3.8 Depending on the nature, quantity and location of the change, two key potential effects on International sites can result, as set out in Article 6(2) of the Directive:

Habitat deterioration and species disturbance

3.9 When a process, or event resulting in or contributing to a process is affecting a site to the extent that it is having an adverse effect, deterioration will be occurring when, as a direct or indirect result of that process, the extent of the qualifying habitat is decreasing, or the structure and functions of that habitat that are necessary for its long term maintenance no longer exist or are threatened, or the conservation status of its typical species is no longer favourable.

3.10 The screening assessment considers the sources of deterioration, the pathways by which this may occur as a result of the various elements of the Plan, the likelihood of these occurring and whether those effects would be significant.

3.11 Contrary to deterioration, disturbance does not directly affect the physical condition of a site. Rather, it is related to species supported by a site. Any event that contributes to the long term decline of a species population on a site can be regarded as significant disturbance, as can any event that contributes to the reduction, or risk of reduction, of the range of that species or the size of the habitat of the species.

3.12 Where screening identifies a likely significant effect resulting in habitat deterioration or species disturbance, the need for further assessment (the Appropriate Assessment) would further consider the effects of habitat deterioration or species disturbance against the objectives of the Directive. This makes it possible to use the definition of favourable conservation status (paragraph 1.20) to interpret the limits of what can be regarded as deterioration or disturbance.

Blocking policies

3.13 A policy in itself may not have adverse direct or indirect effects, but it may prevent future 'public interest' developments[9] that may therefore have a damaging effect on an International site because the original development prevented the damaging development from being located on a less damaging site.

In-combination effects

3.14 Other plans and projects being implemented or in preparation can have the potential to cause negative effects on the integrity of International sites. These effects may be exacerbated when experienced in combination with the effects of the Plan under assessment in this report, leading to an insignificant effect becoming significant.

3.15 The Habitats Directive and Habitats Regulations require that an assessment is made as to whether the Plan has an effect on the designations either alone or in combination. As such, it is necessary that other plans and projects that have the potential to have a significant effect when combined with the Test Valley Revised Local Plan to be identified.

[9] i.e., those that are of such imperative reasons of over-riding public interest that they can justifiably be permitted despite their damaging effects

3.16 National guidance on appropriate assessment notes that:

"only other key plans and projects which the RPB [Regional Planning Body] or LPA [Local Planning Authority] consider most relevant should be collected for the "in combination" test. An exhaustive list could render the assessment exercise unworkable."[10]

3.17 A list of the plans and projects considered to be most relevant has been provided in Appendix 2. It is noted that not all of the plans and projects are relevant to all of the sites.

The International sites

3.18 Designated site boundaries are not always solely drawn around the features that qualify a site for designation. The boundary also needs to include all those elements of the wider site that are vital for the continued ecological functionality of the designated feature[11].

3.19 Summaries of the key features of the identified International sites within the geographic scope of this assessment are set out below. Copies of the full relevant data sheets and supporting information can be found online, and links to this are available on the Test Valley Borough Council website[12].

3.20 The following section also describes the conservation status of the qualifying features for each site in the geographical scope of the assessment as well as outlining the vulnerabilities of these features. These factors are important when considering the likelihood of a significant effect. The potential effects flowing from implementation of the plan are discussed in subsequent sections of this chapter, together with an exploration of how these effects may affect a designated site.

Emer Bog SAC

3.21 Emer Bog was designated as a SAC in 2005, for its areas of transition mire and quaking bog habitat for which it holds one of the best examples in the UK. As well as the mire / bog, two further habitat classes (as referred to by the Directive) are supported within the SAC – broadleaved woodland and lowland heathland. These habitats are not part of the qualifying feature for which the SAC was designated but they nevertheless remain part of the SAC and are equally protected under law and planning policy. The lowland heath and broadleaved habitat features are important for the continued ecological functioning of the transition mire and quaking bog areas – they assist the hydrological functioning of the bog and provide a measure of protection. Broadleaved woodland and lowland heath are rather better represented in this part of the UK than the mire / bog habitats. While the woodland and heathland were not qualifying features, it is important

[10] Planning for the Protection of European Sites: Appropriate Assessment: Guidance for Regional Spatial Strategies and Local Development Documents, DCLG, 2006, page 11.
[11] McLeod, CR, Yeo, M, Brown, AE, Burn, AJ, Hopkins, JJ, & Way, SF (eds.) (2005) The Habitats Directive: selection of Special Areas of Conservation in the UK. 2nd edn. Joint Nature Conservation Committee, Peterborough. www.jncc.gov.uk/SACselection
[12] Available: http://www.testvalley.gov.uk/resident/planningandbuildingcontrol/planningpolicy/local-development-framework/habitat-regulations-assessment

to note that sites with multiple interests are of high intrinsic value. The Directive recognises this in its emphasis on the maintenance of biodiversity. Special emphasis has been given to the identification and delimitation of sites containing a multiplicity of high-quality interests forming an ecologically functional unit.[13]

3.22 The conservation status of the quaking bog and transition mire habitats at Emer Bog are poor, reflecting the national trend (discussed in more detail in Chapter 5 in relation to specific effects). As the area of qualifying habitat within Emer Bog is small, losses of this habitat at this site are likely to be proportionately greater – for instance if half a hectare of habitat starts to deteriorate, this will have a greater impact at site level on Emer Bog than if, for example, half a hectare of habitat on a 250ha site were to deteriorate. Furthermore, given the relative isolation of Emer Bog from other areas of similar habitat, its deterioration is likely to be more significant than if this deterioration occurred in, for example, Scotland or Wales, where the habitat is better represented.

3.23 Therefore, on the basis of the underlying national trend for this habitat, the small size of Emer Bog and its isolation, it cannot be concluded that any effects on the qualifying habitat will not be significant.

3.24 In summary, on Emer Bog, various processes can cause **habitat deterioration**. JNCC (2007) identifies the range of pressures that have been identified as adversely affecting this habitat. These are:

- water abstraction
- grazing
- fragmentation
- absence of or inappropriate management
- water pollution
- air pollution.

Mottisfont Bats SAC

3.25 Mottisfont Bats SAC was designated in 2003. It comprises approximately 200ha of woodland, of mixed types and was selected as it supports an internationally important population of the rare barbastelle bat *Barbastella barbastellus.* At the time of designation, this was the only known maternity roost in Hampshire and one of only six known sites in the UK (2002 data). The boundary of the SAC was defined to ensure the strict protection of known breeding sites and also the core area of habitat used for roosting, commuting and foraging.

3.26 The majority of the SAC is owned by the National Trust and open to public access. The National Trust has actively carried out woodland operations over recent years, including opening up coppice, gradually removing conifer plantations and replanting to native broadleaved woodland. A Woodland Grant Scheme which is targeted at should enhance the habitats and ensure future sustainability. A further quarter of the site is

[13] See Footnote 11 - McLeod, et al (2005)

privately owned and not open to public access. The majority of this SAC is under various Woodland Grant Schemes targeted at restoration, general woodland management and maintaining the rotational coppicing programme

3.27 While the SAC boundary encompasses the core areas of habitat, radio tracking studies have demonstrated that barbastelle bats are a wide-ranging species, and their full ecology is only partially understood. However, the studies showed that the survival of the Mottisfont population is dependent on the conservation of habitat over a much wider area of the surrounding countryside.

3.28 Barbastelle bats are distributed throughout Europe, except Iceland, Northern Ireland, Scotland, most of Scandinavia, Estonia and much of southern Europe. The highest population density is probably in central Europe. It is one of the rarest bats in western Europe, and is regarded as endangered in several countries. A population decrease has been reported over most of its European range[14]. The current UK population is believed to number 5,000 individuals[15].

3.29 Bats use significant landscape features along which to commute between feeding and roosting habitats and possibly to find mates. These linear features can be hedges, woodland edges or streams and rivers. Often these can be combined, for example wooded rivers or hedge lined ditches. Land use and development that severs or weakens this feeding network around the SAC can therefore have adverse effects.

3.30 Feeding habitats are those rich in flying invertebrates occurring in relatively sheltered situations. These include woodlands, grasslands, marshes and open water. Complex habitats or habitat mosaics are likely to be particularly important. These are a feature of landscapes such as the River Test flood plain and associated parklands and wood pastures.

3.31 A report for Natural England[16] concluded a distance extending 7.5km from the SAC boundary should be used to identify plans that would be likely to have an impact upon habitats used by the Mottisfont barbastelles. It therefore follows that land use and development which leads to the loss of or changes to these habitats within the 7.5km zone around the SAC should be considered to be likely to have a significant effect on the Mottisfont Bats SAC.

3.32 In summary, for Mottisfont Bats SAC, **habitat deterioration** can be caused by:

- fragmentation of habitats (on-site);
- direct loss of supporting habitats (i.e. off-site), including fragmentation;
- declining water quality (effects on supporting habitats);
- declining water resource (effects on supporting habitats).

[14] http://jncc.defra.gov.uk/protectedsites/sacselection/species.asp?FeatureIntCode=S1308
[15] Joint Nature Conservation Committee (2007), *Second Report by the UK under Article 17 on the implementation of the Habitats Directive from January 2001 to December 2006*. Peterborough: JNCC. Available from: www.jncc.gov.uk/article17
[16] Jonathan Cox Associates (2010), *Mottisfont Bats Special Area of Conservation (SAC) Protocol for Planning Officers*.

New Forest SAC / SPA / Ramsar

3.33 The New Forest **SAC** encompasses a large and complex area of various woodland, wetland, heathland and grassland habitat, supporting a diverse array of vegetation communities and rare and threatened species. There is a wide range of transitions between wet heath, dry heath, various woodland types, fen and grasslands. The New Forest is unusual because of its long history of grazing in a traditional fashion by ponies and cattle.

3.34 The New Forest supports a range of ecologically important waterbodies and wetlands. Some are permanent waterbodies such as Hatchet Pond, which is an important example of this oligotrophic lake (acidic, low in nutrients thus a scarce habitat) where northern species, more common in the uplands of the UK, co-exist with southern species. Other waterbodies are more temporary and ephemeral, supporting a number of specialist species such as toad rush, coral-necklace, yellow centaury, allseed and chaffweed. Most of these ephemeral / temporary ponds are small (between 5-10 m across) and, although great in number, amount to less than 10 ha in total area. The heavy grazing pressure experienced in the New Forest is of prime importance in maintaining the outstanding flora of these communities. Livestock maintain an open habitat, controlling scrub ingress, and trampling the surface. Commoners' animals also transport seed in their hooves widely from pond to pond where suitable habitat exists. Temporary ponds occur throughout the Forest in depressions capable of holding water for part of the year.

3.35 The New Forest is the largest area of mature, semi-natural beech woodland in Britain and is representative of ancient lowland oak woodland on acidic, sandy or gravelly soils in the southern part of its UK range. It is the most extensive area of active wood-pasture with old oak and beech in north-west Europe. The woodland and heath supports and sustains a unique and varied assemblages of lichens and invertebrates, particularly where the woodlands are open and the tree trunks receive plenty of light.

3.36 In wetter areas, stands of birch – willow occur over valley bog vegetation, with fringing alder – *Sphagnum* moss stands where there is some water movement. These stands appear to have persisted for long periods in stable association with the underlying Sphagnum bog-moss communities, as evidenced by the rich epiphytic lichen communities and pollen record.

3.37 The New Forest contains the most extensive stands of lowland northern Atlantic wet heaths in southern England, as well as important and threatened mire habitats. The wet heaths are important for rare plants, such as marsh gentian and marsh clubmoss, and a number of dragonfly species, including the scarce blue-tailed damselfly and small red damselfly. Wet heaths enriched by bog myrtle are a prominent feature of many areas of the Forest. Unlike much lowland heath, the New Forest heaths continue to be extensively grazed by cattle and horses, favouring species with low competitive ability.

3.38 The New Forest is also the largest area of lowland heathland in the UK. It is particularly important for the diversity of its habitats and the range of rare and scarce species which it supports.

3.39 The New Forest represents *Molinia* meadows in southern England, which occurs in situations of heavy grazing by ponies and cattle in areas known locally as 'lawns', often in a fine-scale mosaic with wet heaths and other mire and grassland communities.

These lawns occur on flushed soils on slopes and on level terrain on the floodplains of rivers and streams. The New Forest *Molinia* meadows are unusual in the UK in terms of their species composition, management and landscape position.

3.40 The grasslands are species-rich, and a particular feature is the abundance of small sedges such as carnation sedge, common sedge and yellow-sedge, and the more frequent occurrence of mat-grass and petty whin compared to stands elsewhere in the UK.

3.41 Much of the New Forest is also designated as a **SPA** because the area supports important populations of breeding birds associated with such habitats, including nightjar, woodlark and Dartford warbler. Breeding honey buzzard and wintering hen harrier are also notable.

3.42 In addition, the New Forest is designated as a **Ramsar site** for the valley mires and wet heaths that found throughout the site and are of outstanding scientific interest. The mires and heaths are within catchments whose uncultivated and undeveloped state buffer the mires against adverse ecological change. This is the largest concentration of intact valley mires of their type in Britain. The site supports a diverse assemblage of wetland plants and animals including several nationally rare species. Seven species of nationally rare plant are found on the site, as are at least 65 British Red Data Book species of invertebrate. The mire habitats are of high ecological quality and diversity and have undisturbed transition zones. The invertebrate fauna of the site is important due to the concentration of rare and scare wetland species. The whole site complex, with its examples of semi-natural habitats is essential to the genetic and ecological diversity of southern England. The New Forest comprises a complex mosaic of habitats overlying mainly nutrient-poor soils over plateau gravels. The major components are the extensive wet and dry heaths with their rich valley mires and associated wet and dry grasslands, the ancient pasture woodlands and inclosure woodlands, the network of clean rivers and streams, and frequent permanent and temporary ponds.

3.43 In summary, for the **New Forest SAC**, **habitat deterioration** can be caused by:

- drainage of wetland habitats
- afforestation of heathland habitats with conifers and other non-native species
- adverse changes in essential grazing by commoners' animals (vulnerable to current economic trends)
- increased recreational pressures.

3.44 For the **New Forest Ramsar** designation, **habitat deterioration** can be caused by[17]:

- commercial-scale forestry
- drainage / land-claim
- introduction of or invasion by non-native species
- recreational disturbance

[17] http://jncc.defra.gov.uk/pdf/RIS/UK11047.pdf

3.45 For the **New Forest SPA**, effects can be experienced through habitat deterioration (as for the SAC and Ramsar designations), while **species disturbance** can be caused by:

- increased recreational pressures.

Salisbury Plain SAC, Salisbury Plain SPA and Porton Down SPA

3.46 Salisbury Plain is the largest area of open chalk grassland in north-west Europe. It is owned by the Ministry of Defence and used intensively for military training. The **SAC** interest is in the chalk grassland and the juniper scrub community supported within these areas.

3.47 Aside from the military, other land uses include agriculture, forestry and recreation. Military training requirements constrain ideal conservation management (including grazing and scrub management) and have led to the establishment of extensive plantations which, over time, may pose a threat to the open grassland landscape and its ecology. An additional threat is stone road construction, which has replaced rutted tracks with engineered stone roads over many kilometres.

3.48 Some areas of the Salisbury Plain SAC are designated Open Access Land under the Countryside and Rights of Way (CROW) Act 2000, while in other areas there are restrictions on access to areas used for military training.

3.49 While the high use of the site by heavy military vehicles and other activity suggests that the grassland is robust (when dry), research[18] suggests that chalk grassland is significantly less resistant to repeat trampling by vehicles and that calcareous grasslands are far slower to recover from habitat disturbance (at least 50 years) than other types of grassland. Disturbance has also been shown to benefit exotic plant species. Additionally, nutrient enrichment has consequences for soil fauna and vegetation composition – dog fouling remains a key issue in areas of public access. The particularly nutrient-rich nature of dog faeces and the large volumes of faeces and urine on some sites result in eutrophication, loss of species diversity and an increase in vegetation height.

3.50 The research suggests that small-scale but acute disturbance events can have significant effects on plant community composition, and can have wider reaching impacts on other aspects of site management.

3.51 In summary, for the SAC designation, **habitat deterioration** can be caused by:

- infrastructure (road) development
- vehicle movements
- recreational use (including dogs and horses)

3.52 The northern part of the SAC is also designated as **Salisbury Plain SPA** for its breeding population of stone curlew (of which the SPA supports 11.6% - 22 pairs – of the national population), and overwintering hen harrier (of which the SPA supports 1.9% - 14 individuals – of the national population).

[18] Hirst et al., 2003

3.53 The southern part of the SAC is designated as **Porton Down SPA** for its breeding population of stone curlew, which is dependent on the chalk grassland habitat, which is the qualifying reason for the site's inclusion within the wider Salisbury Plain SAC.

3.54 Stone curlews visit the UK to breed in summer (March – October), spending the rest of the year in south west Europe and Africa. It is a ground nesting species requiring open, flat ground with short vegetation in undisturbed locations to breed and invertebrate rich pasture to feed.

3.55 In Britain, there has been a significant loss of semi-natural habitats (chalk grassland and grass heaths) that the curlew depend on, largely driven by changing agricultural practices. The stone curlew population at Salisbury Plain is however currently at "favourable conservation status", primarily as a result of the work of the MoD and the Wiltshire Stone Curlew Project. However it is expected to face additional pressures in the future[19].

3.56 Thus, **deterioration of habitats** that the stone curlew depend on may result from:

- expansion of military use

3.57 while **species disturbance** may be caused by

- recreational disturbance.

Solent Maritime SAC and Solent and Southampton Water SPA / Ramsar

3.58 The **Solent Maritime SAC** is a complex site encompassing a major estuarine system on the south coast of England. The SAC includes sixteen Sites of Special Scientific Interest (SSSI) spread out along the Solent. It is designated for its estuary habitats, swards of *Spartina* cord-grass, and Atlantic salt meadows.

3.59 The following factors affect or potentially threaten the Solent Maritime SAC:

- existing and proposed flood defence and coast protection works;
- coastal squeeze of intertidal habitats due to coastal erosion / sea level rise and sea-walls / development in the hinterland;
- developments pressures including ports, marinas, jetties etc. Proposals often involve capital / maintenance dredging to provide / improve deep water access, and land-claim of coastal habitats;
- potential accidental pollution from shipping, oil/chemical spills, heavy industrial activities, former waste disposal sites and waste-water discharge;
- introduction of non-native species e.g. from shipping activity.

3.60 The **Solent and Southampton Water SPA and Ramsar site** comprises a series of estuaries and harbours with extensive mud-flats and saltmarshes together with adjacent

[19] Wiltshire Council (2012), *HRA and Mitigation Strategy for Salisbury Plain SPA in relation to recreational pressure from residential development*

coastal habitats including saline lagoons, shingle beaches, reedbeds, damp woodland and grazing marsh. The mud-flats support beds of *Enteromorpha* spp. and *Zostera* spp. and have a rich invertebrate fauna that forms the food resource for the estuarine birds. In summer, the site is of importance for breeding seabirds, including gulls and four species of terns. In winter, the SPA holds a large and diverse assemblage of waterbirds, including geese, ducks and waders. Dark-bellied brent geese also feed in surrounding areas of agricultural land outside the SPA.

3.61 The following factors affect or potentially threaten the Solent and Southampton Water SPA[20] and Ramsar[21] site through **habitat deterioration** and **species disturbance**:

- Erosion
- Previous flood and coastal defence works, land-claim and dredging operations have modified physical processes and sediment transfer patterns which can have a knock-on effect on the extent and distribution of intertidal habitats.
- Sea level rise and issues related to coastal squeeze.
- Potential for accidental pollution from shipping, heavy industrial activities and former waste disposal sites, as well as on-going impacts from wastewater discharge.
- High levels of pressure both on shore and at sea from recreational and commercial interests, in what is a busy developed area.

River Itchen SAC

3.62 The Itchen is an ecologically rich and important chalk river dominated throughout by aquatic water crowfoot *(Ranunculus)* species. The headwaters contain pond water-crowfoot *Ranunculus peltatus*, while two *Ranunculus* species occur further downstream: stream water-crowfoot *R. penicillatus* ssp. *pseudofluitans*, a species especially characteristic of calcium-rich rivers, and river water-crowfoot *R. fluitans*.

3.63 The river also supports strong populations of southern damselfly, estimated to be in the hundreds of individuals and is one of the major population centres in the UK. It also an unusual habitat for this species in the UK as it represents a population in a managed chalk-river flood plain rather than on heathland.

3.64 The Itchen also supports high densities of bullhead throughout much of its length. The river provides good water quality, extensive beds of submerged plants that act as a refuge for the species, and coarse sediments that are vital for spawning and juvenile development.

3.65 A principal threat to the habitats within the SAC is considered to be the decrease in flow velocities and increase in siltation, which in turn affects macrophyte cover (especially *Ranunculus*). Recent surveys have shown declines in *Ranunculus* cover since 1990, which are attributable to increased abstractions in the upper catchment, coupled with a

[20] JNCC (2006) Natura 2000 Data Form for Solent and Southampton Water SPA – see http://jncc.defra.gov.uk/pdf/SPA/UK9011061.pdf

[21] JNCC (1998) Information Sheet on Ramsar Wetlands for Solent and Southampton Water Ramsar site – see http://jncc.defra.gov.uk/pdf/RIS/UK11063.pdf

series of years with below-average rainfall. Low flows interact with nutrient inputs from point sources to produce localised increases in filamentous algae and nutrient-tolerant macrophytes at the expense of *Ranunculus*.

3.66 The main factor influencing the SAC and that can cause **habitat deterioration** is:

- decrease in flow velocities and increase in siltation.

River Avon SAC

3.67 The Avon in southern England is a large, lowland river system that includes sections running through chalk and clay, with transitions between the two. Five aquatic water crowfoot (*Ranunculus*) species occur in the river system, but stream water-crowfoot and river water-crowfoot are the main dominants. Some winterbourne reaches are included in the SAC.

3.68 The Avon supports sea lamprey, brook lamprey, Atlantic salmon and bullhead. The River Avon has a mosaic of aquatic habitats that support a diverse fish community river and is of high quality with excellent examples of the features that these various species need for survival, including extensive areas of sand and gravel that lampreys and salmon need for spawning.

3.69 Currently much of the system is considered to be at risk from reduced flows, elevated nutrient levels and changes to sediment processes resulting from previous channel modifications.

3.70 The main factors influencing the river system and that can cause **habitat deterioration** are:

- historical modifications for mills, water meadows and more recently land drainage;
- land use in the catchment,
- abstraction of water for public supply and agricultural uses,
- disposal of sewage effluents and
- management of the water courses for fishery, agricultural and other uses.

Kennet and Lambourn Floodplain SAC

3.71 This SAC comprises a cluster of sites in the Kennet and Lambourn valleys in Berkshire. They support one of the most extensive known populations of Desmoulin's whorl snail *Vertigo moulinsiana* in the UK and is one of two sites representing the species in the south-western part of its range. The species is highly associated with high-quality chalk stream habitat. The habitat that supports the species at this SAC is predominantly reed sweet-grass *Glyceria maxima* swamp or tall sedges at the river margins, in ditches and in depressions in wet meadows.

Kennet Valley Alderwoods SAC

3.72 This SAC supports the largest fragments of alder-ash woodland on the Kennet floodplain (in Berkshire). It lies on alluvium overlain by a shallow layer of moderately calcareous peat. The wettest areas are dominated by alder *Alnus glutinosa,* tall herb species, sedges and reeds. Dryer areas include a base-rich woodland flora with abundant dog's mercury *Mercurialis perennis.* These areas also support herb-Paris *Paris quadrifolia*, which is particularly unusual, as it is more typically associated with ancient woodland, whereas the evidence suggests that these stands of woodland are more recent, having largely developed over the past century.

Impact Pathways

3.73 The previous sections identified the International sites that could be potentially affected by the Plan (the **receptors**). These were briefly described, identifying key interest features and particular vulnerabilities of these features.

3.74 In order to carry out the screening of the policies within the Plan, it is necessary to properly understand the ways in which these receptors can be adversely affected – i.e. the **pathways**.

3.75 To complete the screening, it is then necessary to examine the Plan policies to understand the nature of what they would provide for – i.e. would they provide a **source** of an impact – to then understand whether they would create an effect that would affect any of the receptors along the identified pathways.

3.76 Table 3.2, below, summarises the identified sources and pathways that could affect the identified receptors (the designated sites and their qualifying features).

Table 3.2 – Summary of potential effects on International sites, pathways and their sources.

Source	Pathway	Potential effects
Residential development	***Recreational use** of sites from:* ▪ new residents ▪ additional tourism	Disturbance to species – for example breeding birds, over-wintering birds
		Degradation of habitats through increased trampling / wear and tear and impacts to management regimes
Residential and commercial development	*Changes to **water resources** through:* ▪ increased abstraction to supply people and activities	Degradation of habitat through reduced river flows from increased abstraction required to supply new development
		Degradation / drying of habitat through lowered groundwater levels
		Links with water quality (below) – reduced flow can result in increased sedimentation

Source	Pathway	Potential effects
		leading to smothering of benthic habitats / species and can concentrate nutrient levels
	*Changes to **water quality** through:* ▪ increased hard surfaces ▪ increased use of damaging inputs ▪ increased pressure on sewerage infrastructure	Increases in nutrient levels from phosphates and nitrates through increased runoff and increased levels of outflow from sewage treatment works (planned or unplanned) from urban development into watercourses or other water-dependent habitats, leading to algal blooms, growth of undesirable plant species.
		Decreased dissolved oxygen in watercourses
	*Changes to **air quality** through:* ▪ Increased car traffic from residents ▪ Increased commercial traffic –to and from commercial sites ▪ Increased car traffic to / from employment sites ▪ Increased emissions from buildings ▪ Increased emissions from power generation	Increases in nutrient levels through wet / dry deposition and airborne absorption
		Acidification of habitats
	***Habitat fragmentation / loss** through:* ▪ construction ▪ new / upgraded transport links ▪ lighting ▪ culverting / bridging	Permanent loss of habitat outside but functionally linked to an International site, for example areas outside International boundaries that are used by breeding / overwintering bird populations that are designated features of particular sites.
		Fragmentation of habitats that are ecologically linked to an International site and where severing of that link may isolate areas of the wider countryside from the International site – for example severing of a key bat flyways.

Screening

3.77 If it was identified that the effects of a particular policy could potentially undermine a site's conservation objectives along one or more identified pathways, then the likelihood of those effects occurring from the implementation of that policy were considered. The results of this analysis are presented in the Screening Matrix, below, followed by a discussion regarding how these conclusions were drawn.

The screening matrix

3.78 There are four main categories of potential effects that can be attributed to policies within a plan, with various sub-categories, as follows.

Category A- No negative effect	
A1	Options / policies that will not themselves lead to development e.g. because they relate to design or other qualitative criteria for development, or they are not a land use planning policy.
A2	Options / policies intended to protect the natural environment, including biodiversity.
A3	Options / policies intended to conserve or enhance the natural, built or historic environment, where enhancement measures will not be likely to have any negative effect on a European site.
A4	Options / policies that positively steer development away from European sites and associated sensitive areas
A5	Options / policies that would have no effect because no development could occur through the policy itself, the development being implemented through later policies in the same plan, which are more specific and therefore more appropriate to assess for their effects on European sites and associated sensitive areas.

Category B – No significant effect
The screening process may identify an option or policy or proposal that could have an effect but would not be likely to have a significant (negative) effect on a European site (alone or in combination with other plans or projects) because the effects are trivial or '*de minimis'*, even if combined with other effects). This needs to be approached with caution, so as to ensure compliance with the requirements for 'in-combination' effects and the application of the precautionary principle.

Category C – Likely significant effect alone	
C1	The option, policy or proposal could directly affect a European site because it provides for, or steers, a quantity or type of development onto a European site, or adjacent to it.
C2	The option, policy or proposal could indirectly affect a European site e.g. because it provides for, or steers, a quantity or type of development that may be very close to it, or ecologically, hydrologically or physically connected to it or it may increase disturbance as a result of increased recreational pressures.
C3	Proposals for a magnitude of development that, no matter where it was located, the development would be likely to have a significant effect on a European site

C4	An option, or policy that makes provision for a quantity / type of development (and may indicate one or more broad locations e.g. a particular part of the plan area), but the effects are uncertain because the detailed location of the development is to be selected following consideration of options in a later, more specific plan. The consideration of options in the later plan will assess potential effects on European sites, but because the development could possibly affect a European site a significant effect cannot be ruled out on the basis of objective information.
C5	Options, policies or proposals for developments or infrastructure projects that could block options or alternatives for the provision of other development or projects in the future, which will be required in the public interest, that may lead to adverse effects on European sites, which would otherwise be avoided
C6	Options, policies or proposals which depend on how the policies etc. are implemented in due course, for example, through the development management process. There is a theoretical possibility that if implemented in one or more particular ways, the proposal could possibly have a significant effect on a European site
C7	Any other options, policies or proposals that would be vulnerable to failure under the Habitats Regulations at project assessment stage; to include them in the plan would be regarded by the EC as 'faulty planning'
C8	Any other proposal that may have an adverse effect on a European site, which might try to pass the tests of the Habitats Regulations at project assessment stage by arguing that the plan provides the imperative reasons of overriding public interest to justify its consent despite a negative assessment.

Category D – Likely significant effect in combination	
D1	The option, policy or proposal alone would not be likely to have significant effects but if its effects are combined with the effects of other policies or proposals provided for or coordinated by the LDD (internally) the cumulative effects would be likely to be significant.
D2	Options, policies or proposals that alone would not be likely to have significant effects but if their effects are combined with the effects of other plans or projects, and possibly the effects of other developments provided for in the LDD as well, the combined effects would be likely to be significant.
D3	Options or proposals that are, or could be, part of a programme or sequence of development delivered over a period, where the implementation of the early stages would not have a significant effect on European sites, but which would dictate the nature, scale, duration, location, timing of the whole project, the later stages of which could have an adverse effect on such sites.

3.79 As discussed in paragraph 2.4, all policies within the plan were screened according to these categories at Regulation 25 consultation stage. The screening categories assigned to each policy were revisited as the Revised Local Plan progressed and

amended during the iterative process that plan making and HRA follows, as a result of discussions internally within the Council and with Natural England and through re-interpretation of the wording and potential effects of the policy. This Regulation 19 report represents the latest iteration of these policies. Table 3.4 sets out the revised screening matrix following previous iterations[22, 23]. This table forms the starting point for the further consideration of likely significant effect within this report.

3.80 Table 3.3 below explains the coding used in the screening matrix.

Table 3.3 – Screening Matrix key

Category	Description	Colour Code
A	No negative effect	Plain black
B	No significant effect	
C	Likely significant effect alone	**Bold Red**
D	Likely significant effect in combination	

(NB – Policy 6A is a new Policy, screened for the first time at this Regulation 19 stage)

[22] HRA for Core Strategy DPD– Regulation 25 – Screening Report (January 2012)
[23]HRA for Revised Local Plan DPD – Regulation 18 – Preferred Approach (February 2013)
https://www.testvalley.gov.uk/assets/files/3434/TVBC-Local-Plan-DPD-HRA-130208-Consultation.pdf

Table 3.4 – Screening Matrix

International site / Policy Reference	Emer Bog SAC	Kennet and Lambourn Floodplain	Kennet Valley Alderwoods	Mottisfont Bats SAC	New Forest SAC	New Forest SPA	New Forest Ramsar	Porton Down SPA	River Avon SAC	River Itchen SAC	Salisbury Plain SAC	Salisbury Plain SPA	Solent Maritime SAC	Solent and Southampton Water SPA	Solent and Southampton Water Ramsar	Likely Significant Effect?
COM1	**C4**	B	B	**C4**	B	**D2**	**D2**	A5	B	**C4**	A5	A5	**D2**	**D2**	**D2**	**Yes**
COM2	A5	A5	A5	A5	A5	A5	A5	A5	A5	A5	A5	A5	A5	A5	A5	No
COM3	**D2**	B	B	**D2**	**D2**	**D2**	**D2**	B	B	B	B	B	**D2**	**D2**	**D2**	**Yes**
COM4	**D2**	B	B	B	**D2**	**D2**	**D2**	B	B	B	B	B	**D2**	**D2**	**D2**	**Yes**
COM5	**D2**	B	B	B	**D2**	**D2**	**D2**	B	B	B	B	B	**D2**	**D2**	**D2**	***Yes***
COM6	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	No
COM6A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	No
COM7	A5	A5	A5	A5	A5	A5	A5	A5	A5	A5	A5	A5	A5	A5	A5	No
COM8	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	No
COM9	A5	A5	A5	A5	A5	A5	A5	A5	A5	A5	A5	A5	A5	A5	A5	No
COM10	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	No
COM11	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	No
COM12	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	No
COM13	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	No
COM14	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	No
COM15	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	No
LE1	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	No

International site / Policy Reference	Emer Bog SAC	Kennet and Lambourn Floodplain	Kennet Valley Alderwoods	Mottisfont Bats SAC	New Forest SAC	New Forest SPA	New Forest Ramsar	Porton Down SPA	River Avon SAC	River Itchen SAC	Salisbury Plain SAC	Salisbury Plain SPA	Solent Maritime SAC	Solent and Southampton Water SPA	Solent and Southampton Water Ramsar	Likely Significant Effect?
LE2	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	No
LE3	B	B	B	B	B	B	B	B	B	B	B	B	**D2**	B	**D2**	**Yes**
LE4	B	B	B	B	B	B	B	B	B	B	B	B	**D2**	B	**D2**	**Yes**
LE5	B	B	B	B	B	B	B	B	B	B	B	B	**D2**	B	**D2**	**Yes**
LE6	B	B	B	B	B	B	B	B	B	B	B	B	**D2**	B	**D2**	**Yes**
LE7	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	No
LE8	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	No
LE9	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	No
LE10	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	No
LE11	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	No
LE12	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	No
LE13	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	No
LE14	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	No
LE15	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	No
LE16	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	No
LE17	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	No
LE18	A1	B	B	A1	A1	A1	A1	A1	B	B	A1	A1	A1	A1	A1	No
E1	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	No
E2	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	No

International site / Policy Reference	Emer Bog SAC	Kennet and Lambourn Floodplain	Kennet Valley Alderwoods	Mottisfont Bats SAC	New Forest SAC	New Forest SPA	New Forest Ramsar	Porton Down SPA	River Avon SAC	River Itchen SAC	Salisbury Plain SAC	Salisbury Plain SPA	Solent Maritime SAC	Solent and Southampton Water SPA	Solent and Southampton Water Ramsar	Likely Significant Effect?
E3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	No
E4	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	No
E5	A2	A2	A2	A2	A2	A2	A2	A2	A2	A2	A2	A2	A2	A2	A2	No
E6	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	No
E7	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	No
E8	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	No
E9	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	No
LHW1	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	No
LHW2	A3	A3	A3	**C6**	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	**Yes**
LHW3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	No
LHW4	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	No
T1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	No
T2	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	No
T3	B	B	B	B	B	B	B	B	B	B	B	B	B	**D2**	**D2**	**Yes**
CS1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	A1	No
ST1	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	No

Discussion on specific policies

COM1 – Housing Provision

3.81 This policy was originally assessed as having no negative effect. However, the policy explicitly allocates a quantum of residential development in specific areas. The figures in from Policy COM1 of the Revised Local Plan DPD demonstrating this housing need are summarised below.

Table 3.5 – Housing Requirements for plan period

	Northern Test Valley	Southern Test Valley
Requirement	**7,092**	**3,492**
- Completions	901	286
- Existing Commitments	3,853	1,347
- SHLAA: Identified Capacity	1,069	110
- Unplanned Sites (2013/14 – 2028/29)	645	240
Residual Requirement	624	1,509
Residual Requirement plus 10%	**686**	**1,659**

3.82 The 'existing commitments' incorporate unimplemented permissions such as Redbridge Lane and most of Abbotswood for Southern Test Valley[24], and remaining unimplemented permissions at East Anton and Picket Twenty and outline permission at Picket Piece for Northern Test Valley. Existing commitments and completions can be taken off the total requirement for the plan period. The 'residual requirement' (plus the necessary 10% cushion) is thus the total requirement that the Council is seeking to allocate sites – a total of 2,347 across the Borough.

3.83 This residual requirement includes allocations in Southern Test Valley (at Whitenap (COM3) for 1300 dwellings, Hoe Lane (COM4) for 300 dwellings and Park Farm, Stoneham (COM5) for 50 dwellings) and Northern Test Valley (the new neighbourhoods at Picket Piece (COM6) for an additional 400 dwellings and Picket Twenty (COM6A) for an additional 300 dwellings). Thus the residual housing requirement in COM1 almost

[24] Southern Test Valley comprises the seven parishes of Ampfield, Chilworth, North Baddesley, Nursling and Rownhams, Romsey Extra, Romsey Town and Valley Park, and are within the area covered by the Partnership for Urban South Hampshire (PUSH).

entirely accommodated by the allocations, with only 9 additional outstanding dwellings needed in Southern Test Valley over what is allocated.

3.84 However, while it may be the case that these figures suggest housing needs are almost fully accommodated within the allocated sites, the planning authority cannot rule out that housing numbers would exceed housing figures within COM1 as this number cannot be treated as a cap, or upper limit on housing numbers. It also allows the authority a degree of additional flexibility over the plan period.

3.85 Given that there is no location or scale criteria, and the fact that this is not a cap or upper limit on housing numbers, it should be considered that even when the allocated sites are removed from consideration, there is an acknowledged risk that there may be further proposals for developments at locations and / or of a scale that could give rise to significant effects either alone or in combination with other plans / projects.

3.86 The 'identified capacity' relates to promoted sites that in principle would be acceptable for development (e.g. within the settlement boundary) but do not have permission. Therefore, while there is some indication of location and scale that has developed through the SHLAA process, there is no certainty which of these may come forward. In addition, an allowance is made for unplanned sites for which the location is unknown. Therefore, there is still a quantum of residential development that would flow from implementation of this policy, although there are no criteria relating to location or scale of individual sites.

3.87 Increased recreational pressure on International sites remains a key concern with respect to COM1, outside of allocated sites. The revised supporting text to this policy recognises this, stating that

'Any site coming forward that is not an allocation will need to be considered against all relevant policies within the Local Plan and other legislation including that affecting international ecological designations.'

3.88 Consideration of the effects of COM1 on specific International sites is set out in the following text:

Porton Down

3.89 Porton Down (designated for stone curlew and thus potentially susceptible to increased recreational disturbance) is not publically accessible. Therefore it is considered unlikely that any effects flowing from the plan would affect this site.

Salisbury Plain

3.90 With respect to Salisbury Plain SAC and SPA, these sites are largely within Wiltshire. As a result of concerns over impacts on these sites from increasing residential development close to these sites, Wiltshire Council has implemented a process whereby developer contributions from new developments support on-going conservation work related to the features that these sites sustain. The level of contributions has been set such that the likely small numbers of dwellings within Test

Valley that are within the acknowledged zone of influence where such affects may arise from would also be accommodated. Therefore, COM1 is considered unlikely to have a significant effect on Salisbury Plain.

New Forest SPA / Ramsar, Emer Bog SAC and Solent and Southampton Water SPA / Ramsar

3.91 The New Forest and Solent designations draw visitors from large distances and therefore it cannot be concluded at this stage that houses flowing from implementation of COM1 would be outside a distance where residents may reasonably considered to visit these sites. Given the likely housing numbers (discussed in paragraphs 3.81 to 3.88) and the distance to the International sites, it is considered that COM1 would not have a likely significant effect *alone*, but may well do *in combination*, hence a screening assessment of D2 with respect to recreational impacts and (with respect to Solent Maritime SAC and the Solent and Southampton Water Ramsar site) changes in air quality as a result on increasing road traffic near these sites.

3.92 Emer Bog is believed to draw visitors from a far smaller catchment that the New Forest and Solent designations. However, there remains uncertainty over the distance that effects on this SAC can be ruled out (discussed in greater detail in Section 4 – Appropriate Assessment).

3.93 Thus COM1 is considered to have a likely significant effect on these International sites due to increases in recreational pressure.

Mottisfont Bats

3.94 Although the Mottisfont Bats SAC woodlands are publically accessible, increasing levels of recreation in the woodland is not considered to have a likely significant effect as the bat roosts would be neither destroyed, damaged or disturbed by this process. Additional numbers of people using the SAC (or off-site supporting habitat) would not degrade the habitat to the extent that its use as a foraging or commuting resource for the bats would be compromised.

3.95 The 7.5km zone (see paragraph 3.31) encompasses an element of both Northern Test Valley (including rural Test Valley) and Southern Test Valley. Residential development flowing from implementation of COM1 within this zone has the potential to result in the loss of key habitats that are important to maintain the conservation status of the barbastelle bats that the SAC is designated for.

3.96 Thus COM1 is considered to have a likely significant effect on the SAC.

River Itchen

3.97 The River Itchen is vulnerable to changes in water resource and water quality potentially arising from increases in residential development, although this is dependent on scale and location.

COM2 – Settlement Hierarchy

3.98 This policy concerns the hierarchy of the settlements rather than promoting development of any particular level. While location criteria are used, there are no quantitative criteria. However, where a proposal meets the location criteria, the policy states "*Development outside the boundaries of settlements in the hierarchy (as identified on maps 1 – 43) will only be permitted if a) it is appropriate in the countryside as set out in the local plan policies; or b) it is essential for the proposal to be located in the countryside*". Thus there is a clear referral down to other policies within the plan – for example, development in the countryside is also guided by other policies in the plan, notably COM10, COM12, LE16 and LE17.

COM3 and COM4 – New Neighbourhoods at Whitenap and Hoe Lane

3.99 These policies provide for two major developments to the south of Romsey – at Whitenap (COM3) for up to 1300 new dwellings, in addition to employment use, schools and a local centre, as well as local transport infrastructure works; and Hoe Lane (COM4), for up to 300 new dwellings. As such it is considered that the scale, location and nature of the developments promoted by these policies would be likely to result in a range of effects on International sites.

3.100 COM3 and COM4 are allocated sites of a known quantity and location. These also have large provisions of informal semi-natural open space for outdoor recreation such as walking, jogging or dog-walking and thus would cater for much day-to-day and local needs. It is concluded that because of the scale of the housing at these sites, distance from International sites and on-site recreational provision, a likely significant effect *alone* from these policies is unlikely. However, they are within the visitor catchment of the New Forest and Solent designations and therefore it cannot be concluded at this stage that people at the allocated sites would *not* visit the designations; it cannot therefore be concluded that they would not contribute to *an in-combination* effect on these designations from an increase in recreational use of these International sites.

3.101 COM3 and COM4 are also close to Emer Bog SAC, which is vulnerable to the effects of increasing recreational use of the site, hence a screening assessment of likely significant effect with respect to this site.

3.102 These policies as set out in the Pre-Submission Plan include an additional criterion specifically to address the issue of increased recreational pressure. These policies require additional new informal recreational open space at a level of 8.0 hectares per 1000 new population specifically to avoid impacts to European sites. This is to be provided at the Luzborough Plantation. The policies also require this new recreational space to be subject to an agreed long term management plan, which is being implemented at an early stage of any development.

3.103 There are also potential effects from factors such as increases in air pollution resulting from any increase in local road traffic flowing from the developments, with respect to Solent Maritime SAC and the Solent and Southampton Water Ramsar site.

3.104 Part of the Whitenap (COM3) site is also within 7.5km of Mottisfont Bats SAC and hence there is potential for this to result in the loss of key habitats that are important to maintain the conservation status of the barbastelle bats that the SAC is designated for.

3.105 With respect to COM4 (Hoe Lane), a review of the boundary of the site identified that this site is outside the 7.5km consultation zone around Mottisfont Bats SAC. Hence it is not considered that this policy would have a likely significant effect on that site.

3.106 COM3 and 4 are outside the identified zone of discharge constraint around Emer Bog SAC and thus are not considered to have a likely significant effect on the SAC through changes in water resource or quality.

COM5 – Park Farm, Stoneham

3.107 As with COM3 and 4, this is an allocated site of a known quantity and location. It is similarly concluded that a likely significant effect *alone* from this allocation is unlikely with respect to increased recreational use of designated sites. However, it is within the catchment of the New Forest and Solent designations and close to Emer Bog. Therefore it cannot be concluded at this stage that residents of any development at Park Farm, Stoneham would *not* visit these International sites; it cannot therefore be concluded that they would not contribute to an *in-combination* effect on these sites.

3.108 It is also considered (as with COM3 and 4) that COM5 may contribute to effects arising from changes in air quality on nearby International sites (given its proximity to Solent Maritime SAC and the Solent and Southampton Water Ramsar site) through the increase in local road traffic flowing from the development.

3.109 As with COM3 and 4, COM5 is outside the identified zone of discharge constraint around Emer Bog SAC and thus are not considered to have a likely significant effect on the SAC through changes in water resource or quality

COM8 – Rural Exception Affordable Housing

3.110 This policy does not promote development – rather, it provides qualitative criteria and a delivery mechanism by which rural exception affordable housing would be assessed, should such proposals come forward as guided by the housing figures identified in COM1. There are no measures in the COM8 relating to magnitude or location of development.

COM9 – Community-Led Development

3.111 This policy does not promote development – rather, it seeks to control it by introducing qualitative criteria by which community-led development would be assessed. Development is implemented through other policies in plan i.e. COM1. This policy in itself does not result in development and there are no measures in the policy relating to magnitude or location of development.

COM10 – Occupation Dwellings in the Countryside

3.112 This policy does not promote development – rather, it seeks to control it by introducing qualitative criteria by which occupational accommodation in the countryside would be assessed. This policy in itself does not result in development and there are no measures in the policy relating to magnitude or location of development.

COM11 – Existing Dwellings on the Countryside

3.113 This policy relates to development of existing residential sites. The policy does not promote development – rather, it seeks to control it by introducing qualitative criteria by which development would be assessed. Additionally, development that accords with this policy would not result in any significant change to environmental conditions – i.e. no additional land take, no net gain in residential provision and subsequent recreation use of International sites.

COM13 – Gypsy, Traveller and Travelling Showpeople

3.114 This policy does not promote development – rather, it seeks to control it by introducing qualitative criteria by which development to accommodate gypsies, travellers and travelling showpeople would be assessed. This policy in itself does not result in development and there are no measures in the policy relating to magnitude or location of development.

COM14 – Community Services and Facilities

3.115 This policy does not promote development – rather, it seeks to control it by introducing qualitative criteria by which development for community services and facilities would be assessed. This policy in itself does not result in development and there are no measures in the policy relating to magnitude or location of development.

LE3, 4, 5 and 6 – Employment Sites at Adanac Park, Land at Brownhills Way, Land at Bargain Farm, and Land at Whitenap

3.116 These policies relate to the local economy rather than residential development. While they provide a location for new development, the type of change resulting from these will not affect the designated feature of the SPA as implementation of the policies will not increase recreational or other disturbance in areas used by the overwintering or breeding birds that the SPA is designated for. Thus it is considered these policies will have no significant effect with respect to the Solent and Southampton Water SPA.

3.117 These policies have however been assessed as having a likely significant effect in combination with other plans or project with respect to the Solent Maritime SAC and the Solent and Southampton Water Ramsar site, by virtue of the potential increases in airborne pollutants potentially affecting the habitats and vegetation features that the SAC and Ramsar are designated for.

LE7 – Employment Site at Nursling Estate

3.118 The Nursling Estate is an existing site of predominantly B8 use. This policy does not promote development of the site, rather it seeks to control and manage potential future uses to ensure that its primary function remains as B8. Consequently implementation of this policy would not result in any change to environmental conditions.

LE16 – Re-Use of Existing Buildings on the Countryside

3.119 This policy does not promote development – rather, it seeks to control it by introducing qualitative criteria.

LE17 – Employment Sites in the Countryside

3.120 This policy relates to development of existing employment sites. This policy does not promote development – rather, it seeks to control it by introducing qualitative criteria. Additionally, development that accords with this policy would not result in any significant change to environmental conditions – i.e. no additional land take, no net gain in residential provision and subsequent recreation use of International sites.

LE18 – Tourism

3.121 This policy does not promote development – rather, it seeks to control it by introducing qualitative criteria by which tourism-related development would be assessed. This policy in itself does not result in development and there are no measures in the policy relating to magnitude or location of development.

LHW2 – Ganger Farm

3.122 Given the scale of the proposal at Ganger Farm, the distance from the SAC and the habitats present (type and extent), it is considered that it would be unlikely that any work here would, *on its own*, result in a significant effect on Mottisfont Bats SAC from *direct* habitat loss, even though it is within 7.5km of the SAC. However, if the policy was implemented then other plans or projects that adversely affects any habitats associated with barbastelle bats within 7.5km of the SAC, then LHW2 could be considered likely to have a significant effect *in combination* with these other plans or projects. It is also considered that because the proposals are likely to include floodlighting, this element of the policy may be considered to have a likely significant effect *alone*, should any affected habitat support barbastelle bat roosts that are ecologically linked to the SAC.

T3 – Park and Ride

3.123 This policy has been assessed as presenting no significant effect with respect to the Solent Maritime SAC. There were initial concerns were over potential increases in road transport from the policy and subsequent effects on sensitive SAC habitats near the Redbridge Flyover. However, as the policy is in place to encourage more public

transport, diverting car users from using the route, the policy is not seen as generating any net increase in road transport exhaust emissions that would affect any designated sites.

3.124 However, during discussions with Natural England, concerns were raised regarding whether the provision of this facility would enable a greater degree of public access to the nearby areas of the Solent and Southampton Water SPA / Ramsar site. While the likely level of additional visitors via this route is unlikely to be significant on its own, it is agreed that when considered in combination with other elements of the plan, and other plans / projects, there may be likely significant effect.

Summary

3.125 Table 3.4 below identifies the remaining outstanding concerns following the revised screening assessment. This identifies that policies COM1, 3, 4 and 5, LE3, 4, 5 and 6, LHW2 and T3 need further consideration, in terms of potential impacts to International sites from recreational disturbance, habitat loss / deterioration, atmospheric pollution and reduction in water resources and quality.

Table 3.6 – Likely Significant Effects of the Plan, requiring further assessment

Site	Source	Pathway	Receptor	Likely significant effect
Emer Bog SAC	*COM1, COM3, COM4, COM5*	Recreational use of site	Transitional mire habitat	Degradation of qualifying habitat through change to site management regime
	COM1	Reduction in water resource		Degradation of qualifying habitat through decreased water resource
		Reduction in water quality		Degradation of qualifying habitat through increased nutrient input
Mottisfont Bats SAC	*COM1, COM3, LHW2*	Loss of habitat though construction	Off-site habitat, primarily: ▪ woodland ▪ hedgerows ▪ watercourses ▪ fen / swamp ▪ unimproved grassland ▪ scrub	Permanent loss of off-site habitat used by commuting and foraging barbastelle bats, including severing of ecological linkages / flyways
	COM1	Reduction in water resource	Off-site habitat, primarily: ▪ watercourses ▪ fen / swamp ▪ wet woodland	Deterioration of habitat through reduction in groundwater
New Forest SPA / Ramsar	*COM1, COM3, COM4, COM5*	Recreational use of site	Ground-nesting bird species: ▪ Dartford warbler ▪ woodlark ▪ nightjar	Loss of available habitat through increased levels of disturbance
River Itchen SAC	*COM1*	Reduction in water resource	Designated habitats and species: ▪ Water courses with *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation ▪ Southern damselfly Bullhead	Habitat loss and degradation through reduction in flows and increased sedimentation
		Reduction in water quality		

Site	Source	Pathway	Receptor	Likely significant effect
Solent Maritime SAC	*COM1, COM3, COM4, COM5, LE3, LE4, LE5, LE6*	Atmospheric pollution	Designated habitats: ▪ Estuaries ▪ Coastal saltmarshes ▪ Seagrass swards	Degradation of qualifying habitat through nutrient enrichment from airborne pollutants
Solent and Southampton Water SPA	*COM1, COM3, COM4, COM5, T3*	Increased recreational disturbance	Designated species: ▪ Over-wintering brent geese (disturbance of foraging areas) ▪ Over-wintering waders (disturbance of high tide roost sites)	Habitat loss (i.e. loss of habitat available for use by qualifying bird species on-site and off-site supporting habitats, rather than permanent land-take)
Solent and Southampton Water Ramsar	*COM1, COM3, COM4, COM5, T3*	Increased recreational disturbance	Designated species: ▪ Over-wintering brent geese (disturbance of foraging areas) ▪ Over-wintering waders (disturbance of high tide roost sites)	Habitat loss (on-site and off-site supporting habitats)
	LE3, LE4, LE5, LE6	Atmospheric pollution	Ramsar qualifying habitats (criteria): ▪ Coastal saltmarshes	Degradation of qualifying habitat

4 Appropriate Assessment

4.1 This section addresses Stages 2 and 3 of the HRA process (see Table 2.1 in Chapter 2), which consider if the likely significant effects on European Sites identified through the Stage 1 (Screening Stage) in Chapter 3 and detailed in Table 3.3 (summarised in Table 3.4) have the potential to adversely affect the integrity of International sites.

4.2 The screening (including consideration of the 'in-combination' effects of other plans or projects) identified five main pathways whereby significant effect could impact on the identified International sites, as set out in Table 3.2:

- recreational disturbance
- reduction in water resource
- reduction in water quality
- habitat deterioration through construction.
- atmospheric pollution

4.3 Each of these issues is investigated further in the following chapters.

4.4 The following sections of this chapter examine how the Revised Local Plan DPD can give rise to these effects and the implications of the effects for the sites' conservation objectives. The **'Effects'** section examines what effects the plan would have in terms of giving rise to additional recreational activity and whether that would be experienced on the International sites in question.

4.5 Where the 'Effects' section concludes that the Plan, or a particular element of it would not adversely affect a given International site, this will be stated, summarised in Chapter 10 (Conclusions and HRA Record) and not considered further.

4.6 Where an examination of the effects cannot conclude an adverse effect will not occur, the **'Implications'** section examines how the identified effect would affect the International site in question with respect to its conservation objectives. If this section concludes that the Plan, or a particular element of it would not undermine the conservation objectives of a given International site, this will be stated, summarised in Chapter 10 (Conclusions and HRA Record) and not considered further.

4.7 Where an examination of the implications of the effects of the Plan (or elements of the Plan) cannot conclude that the conservation objectives would not be undermined, the **'Counteracting Measures'** section examines how the effects could be counteracted to the extent that no adverse effect would occur. Recommendations are made appropriate to the identified impacts to identify how the adverse effect can be avoided.

5 Recreational activity

5.1 Many people enjoy outdoor recreation and leisure activities and contact with wildlife and the natural environment. While such activities have been proven to have positive mental and physical health benefits for individuals and whole communities[25], and should be supported and facilitated, some recreational activities in certain natural environments can have adverse effects on biodiversity.

The effects of the plan

5.2 As identified in the work that supported the Screening stage of this assessment (see summary in Table 3.6), two distinct types of effect are associated with recreational visits to important biodiversity conservation sites:

A) *Deterioration of habitats* as a result of, for example, frequent trampling, horse riding, climbing etc. Deterioration becomes significant where it has an effect on changing the natural characteristics of the habitat (such as trampling of heathland resulting in loss of heather cover), to the extent that it undermines the conservation objectives. Recreation can also result in habitat deterioration where the level or type of activity compromises the effectiveness of any on-site conservation management measures.

This is of concern for Emer Bog SAC.

B) *Disturbance of species* from activities such as those above, plus, for example, angling, sailing, canoeing, shooting and a wide range of other outdoor recreational pursuits. Disturbance becomes significant where it affects the normal patterns of behaviour, life cycles and breeding success of species to the extent that the conservation objectives become undermined.

This is of concern for New Forest SPA / Ramsar site and Solent and Southampton Water SPA / Ramsar site.

5.3 Implementation of the plan will result in a net increase in the number of dwellings across Test Valley. This will result in more people visiting the countryside and coastal areas in and near Test Valley. The extent to which increases in recreational use of International sites would flow from the Plan is dependent upon a number of factors including:

- the distance of the development from the site or feature;
- the availability and accessibility of open space;
- socio-economic status of the household (especially car ownership);
- demography of the household (including children in the household).

[25] Natural England (2010), *'Nature Nearby'- Accessible Natural Greenspace Guidance*.

The Borough Council's strategic approach to recreational pressure

5.4 The Council has worked hard to develop a strategy to address the issue of recreational pressure. There are two key elements of this, as follows:

Strategic alternative open space

5.5 There is no agreed standard of provision of alternative green spaces which would provide an alternative destination to the European sites affected by the Plan. However, attempts have been made at other ecologically sensitive areas which experience visitor pressures to quantify the amount of land needed to counteract this additional pressure. These can be drawn on to inform the approach to be taken:

- Thames Basin Heaths SPA

  The approach to mitigation for this designation has been established for some years. As part of the Examination in Public for the South East Plan, there was specific consideration of the appropriate approach to mitigation for this designation[26], with a number of approaches being considered. The outcome recommendation of this report set out that suitable alternative natural green space should be provided at a scale of 8 hectares (ha) per 1,000 population as part of the mitigation package. This standard is now enshrined in the Thames Basin Heaths Special Protection Area Delivery Framework[27].

- Ashdown Forest SPA and SAC

  A number of studies have been undertaken for this area looking at visitor use. It is understood that Natural England has advised local planning authorities that, based on the approach taken for the Thames Basin Heaths, alternative green space should be provided at a standard of 8ha per 1,000 increase in population[28].

- Dorset Heaths SPA

  A significant amount of work has been undertaken looking at recreational pressures on the Dorset Heaths SPA. A Development Plan Document setting out a joint approach to mitigation is being developed. Alternative green spaces are acknowledged form part of a package of mitigation measures; however a specific scale of provision does not appear to have been established.

5.6 In light of the approach taken for other SPA designations, the Council proposes to adopt the **8ha per 1,000** population figure as the basis for the scale of mitigation for recreational use International sites.

[26] Report to the Panel for the Draft South East Plan Examination in Public on the Thames Basin Heaths Special Protection Area and Natural England's Draft Delivery Plan, P. Burley, 2007.
[27] Thames Basin Heaths Special Protection Area Delivery Framework, Thames Basin Heaths Joint Strategic Partnership Board, 2009.
[28] Habitats Regulations Assessment for the Mid Sussex District Plan, Urban Edge Environmental Consulting, 2013 (paragraph 6.3.8) (available: http://www.midsussex.gov.uk/media/BP3_HRAMay13.pdf).

5.7 The Revised Local Plan includes proposals for additional residential development within Southern Test Valley – with a total figure of 3,492 dwellings in the Plan period. Some of this development has already been completed or permitted, resulting in 1,659 dwellings to be planned for.

5.8 In respect of Southern Test Valley, an estimate of the land required for mitigation (as alternative green space) has been calculated on the basis of 8ha per 1,000 population based on the development proposed within the Revised Local Plan. This is in addition to the provisions secured in relation to public open space (including parks and gardens and informal recreation areas.

5.9 2011 Census data gives a figure of 2.37 persons per dwelling. A figure of 2.4 persons per new dwelling has been used to calculate the likely increase in population resulting from the Plan. For Southern Test Valley, this gives a figure of (1,659 dwellings x 2.4 persons per dwelling) = 3,982 people. Applying the standard of 8ha per 1,000 population would generate a need for approximately 32ha of alternative green space.

5.10 The majority of this population increase would be associated with two main allocations, namely Whitenap in Romsey (for 1,300 dwellings) and Hoe Lane in North Baddesley (for 300 dwellings). These allocations would therefore require the provision of approximately 30.7ha of alternative green space (based on the same calculations).

5.11 The landowner for these two sites also controls land adjoining the two allocations, which includes the Luzborough Plantation (46.2ha in size). Subject to Luzborough Plantation being able to meet the *quality* requirements of alternative green spaces (see below, in relation to specific International sites), it would have the capacity to provide the *scale* of mitigation required for all of Southern Test Valley. The principle of public access to the woodland has been agreed with the landowner.

5.12 The Plan needs to be considered as a whole as well as through its separate elements. As set out in the Plan, Policy COM1 supporting text now includes specific reference for sites to be considered in the context of International sites, while Policies COM3 and 4 include a specific requirement for these sites to be supported by additional provision for new areas of strategic areas of informal recreational space in a semi-natural setting, to be located at Luzborough Plantation.

5.13 This alternative green space needs to be a long term provision, and Natural England has informally advised the Council that this could be considered as being a period of 125 years. The Plan reflects this, requiring long term management of the site to be secured before development can commence.

New research into visitor use of Test Valley's open spaces

5.14 In conjunction with the development of the approach for the identified strategic alternative green space, the Council has embarked on a programme of research to better understand how residents of Test Valley use larger semi-natural areas of open space for informal recreational purposes.

5.15 This work will identify the proportions and types of households that currently access large areas of semi-natural open space for recreational purposes, the activities they do there and the features that particularly attract them to the sites they use.

5.16 This work will have a range of outcomes. It will help identify the visitor catchments of areas of open space – particularly those that have limited current research related to them, it will identify what Test Valley residents use such spaces for, and what attracts them to such spaces.

5.17 This information will allow the Council, when considering planning applications flowing from Policies COM1, COM3 and COM4, to be able to understand:

- If people from the new developments are likely to visit nearby International sites; and,
- If any alternative recreational green space is appropriate in terms of its location, size and qualities to counteract any additional pressure.

5.18 This work is not yet complete; the evidence-gathering element has started and is expected to finish in early 2014. This will be followed by necessary analysis and reporting.

Conclusion

5.19 To provide a strategic solution to recreational pressure from the two key allocations in Southern Test Valley (COM3 and COM4), a large, strategic area (46.2ha) of new alternative green space will be provided through these policies.

5.20 In addition, a detailed study of residents' use of such spaces is currently being carried out. This will inform the detail of the strategic alternative recreational site where currently established quality criteria are less robust with respect to certain designations and also provide information where other alternative sites or similar counteracting measures are needed for sites outside the allocations – for example those flowing from COM1.

Emer Bog

5.21 A visitor survey carried out to support the recent appeal at a proposed residential development at Nutburn Road, North Baddesley[29] conducted interviews with visitors at the access points to the SAC. The survey identified that just over half of visitors to Emer Bog arrived by foot (58%), and these visitors travelled on average 560m to reach the site. Overall, including people arriving by car, average distance travelled to reach the site was 1.6 km.

5.22 This *suggests* that the SAC has a small catchment area for visitor origination points, used mainly by visitors within easy walking distance, with most visitors originating from North Baddesley and Romsey. The SAC has very few parking spaces, comprising only

[29] 10/00494/OUTS – Land at Nutburn Road

four spaces near the Wildlife Trust's main access to the north of the site and a small number of informal verge spaces along this road. All these are well-used and these are believed to act as a control on the number of vehicles that can park at any one time. However, the presence of these parking spaces means that a proportion of visits are likely to come from further than easy walking distance.

5.23 The survey also identified that much of the dog-walking activity occurred on the open access land, that 97% of dog walkers (who themselves make up 87% of visitors) let their dogs off the lead and that 39% of dogs stray off the paths.

5.24 However, as this is a fairly small-scale study over a short time period it is difficult to draw robust conclusions from this at this time. The current programme of research will provide a great deal more clarity.

5.25 **COM1** (Housing Provision) may result in development within the SAC visitor catchment, but the level cannot be gauged. This policy does contain a requirement that proposals flowing from its implementation are assessed against impacts on International sites. However, the lack of understanding at this stage regarding the use of the SAC means that a complete assessment is not possible. Therefore, without the on-going research into residents' use of informal open spaces, effects on the SAC from implementation of COM1 could not be ruled out.

5.26 **COM3** is outside the 1.6km potential visitor catchment identified from the EPR study (undertaken for the application at Nutburn Road). However, as discussed, this has not been robustly tested. This policy does however require the development to provide recreational access to substantial areas of semi-natural space at both Beggarspath Wood and Luzborough Plantation.

5.27 **COM4** is close to the SAC and visits to Emer Bog from Hoe Lane cannot be ruled out. However it should also be recognised that Hoe Lane is closer to Luzborough Plantation than Emer Bog.

5.28 Based on the standard of 8ha of alternative green space per 1,000 new population, the alternative green space at Luzborough Plantation and Beggarspath Wood is considered of sufficient *scale* to meet the requirements. However, Emer Bog (and the surrounding landscape of the wider Baddesley Common) provides for the most part a far more open landscape, of a very different character to the more closed woodland of Luzborough Plantation or Beggarspath Wood. It may be the case that this is not a constraint to these sites being used as suitable alternatives to Emer Bog. However this cannot be concluded at present.

5.29 Therefore, without the on-going research into residents' use of informal open spaces, effects on the SAC from implementation of COM3 and COM4 could not be ruled out.

5.30 However, the Plan contains a policy dedicated to consideration of biodiversity (Policy E5). This states that:

"Development that is likely to result in a significant effect either alone or in combination on an international or European nature conservation designation, or a site proposed for such designation, will need to satisfy the requirements of the Habitats Regulations."

5.31 There is therefore some level of assurance that any development proposals flowing from COM1, COM3 and COM4 would still need to go through this process, and if these proposals did not include measures to avoid adverse effects on the SAC then permission could not be granted and be in accordance with the plan. However, while guidance from Natural England identifies that it can be appropriate to introduce such a 'blanket' policy to address certain elements of uncertainty related to how the plan would be implemented, it also states that policies introduced to remove uncertainty need to be targeted specifically to deal with the issue that is causing the uncertainty.

5.32 Following the Regulation 18 version, additional policy wording has been added to COM3 and COM4,

"8.0ha per 1,000 population of land to be provided to mitigate the impact of the development on sites of European importance."

while the supporting text to COM1 additionally states (following the Regulation 18 consultation):

"Any site coming forward that is not an allocation will need to be considered against all relevant policies within the Local Plan and other legislation including that affecting International ecological designations".

5.33 This demonstrates that the Plan includes sufficient text in either the Policies themselves, or their supporting text, that would ensure that measures to counteract potential adverse impacts will be provided.

5.34 The strategic approach the Council is taking with respect to provision of new alternative open space as well as responding to the on-going research to support this and other similar measures will ensure that developments flowing from these policies can and will only be assessed against up to date and appropriate information relating to these issues. Developments flowing from COM1, COM3 and COM4 can therefore only be supported by the Plan where these demonstrate that such projects would not cause an increase in recreational use of the SAC (thus not adversely the SAC).

5.35 It is therefore concluded that Polices COM1, COM3 and COM4 **would not** result in increased recreational use of the SAC.

5.36 **COM5** (Residential Development at Park Farm, Stoneham) is approximately 5.5km away from the SAC. It is concluded therefore that this policy **would not** result in increased recreational use of the SAC.

New Forest SPA / Ramsar

5.37 The most recent comprehensive visitor survey of the New Forest National Park was undertaken in 2005 for the then Countryside Agency (now part of Natural England) by Tourism South East (TSE) Research Services. The survey, known as the PROGRESS survey estimated that some 13.345 million visits are made to the New Forest each year. Of these, 35% (4.671 million) were local day visits, originating from within the National Park itself and from within an area of 8km around the park. A further 25% (3.336

million) were from non-local day visits. Of these non-local day visits, 52% (0.902 million) were from within Hampshire.

5.38 Based on the survey, Test Valley residents made up 2.6% of all visitor interviews and 2.6% of all visitors in groups with those who were interviewed. On the assumption this was a representative survey sample it was therefore estimated that Test Valley residents made 2.6% of all the visits to the New Forest each year i.e. 346,970 visits per year. The visitor profile for Test Valley residents was constructed based on this figure and on detailed analysis of the questionnaire surveys completed by Test Valley residents as part of the TSE visitor survey of the New Forest. This visitor profile is shown in Table 5.1 below:

Visitor Group Type	Percentage of All Visits by Test Valley Residents	Total Visits per Annum
Staying Tourists	1.31	4,545
Local Day Visitors from within 8km)	43.8	151,972
Non-local Day Visitors	54.89	190,451
TOTAL	**100**	**346,970**

Table 5.1 – Profile of Visits to the New Forest from Test Valley Residents

5.39 In 2006 (the nearest date to the PROGRESS study for which an estimate is available), the population of Test Valley was projected to be 112,285[30]. Using the profile in Table 5.1 it can thus be estimated that on average, there were 3.1 visits per annum to the New Forest for every person in the Borough. Population projections for Test Valley up to 2029 is for an increase of approximately 23,000, which would be accommodated by the housing to be delivered through the implementation of the Plan.

5.40 It can be estimated using these figures than an additional 71,300 visits each year (approximately 195 per day) to the New Forest could potentially be generated by the growth of the Test Valley population in the plan period, if avoidance measures are not implemented.

5.41 **COM3** and **COM4** are the two larger allocations in Southern Test Valley, and include specific policy wording requiring provision of alternative green space at Luzborough Plantation to support any new housing development.

5.42 The issues resulting in the need for mitigation from recreational use of Thames Basin Heath are similar to the New Forest and the scale of mitigation has been scrutinised at a public inquiry for this designation. Large areas of the New Forest visited by the public comprise open heathland and the characteristics of the visits made are similar. The key difference is that the New Forest is a national park and a major tourist destination in its

[30] http://www3.hants.gov.uk/factsandfigures/population-statistics/pop-estimates/long-term-proj.htm

own right attracting a wider range of visitors (note that mitigation for use of the National Park by tourists would not be within the remit of Test Valley to provide mitigation for).

5.43 The Thames Basin Heaths SPA is designated for some of the same species as the New Forest; also Ashdown Forest SPA has a number of similarities to the New Forest, in terms of its history, the access available and its nature conservation value.

5.44 The Green Dimensions study (2009) commissioned by the Council reviewed the existing evidence regarding why people visit the New Forest. This review has informed what key attributes alternative green spaces would need to have to provide an attractive alternative. It would be unreasonable to try to replicate all of the attributes of the New Forest which has its own unique history and character which has resulted in it being designated as a national park. The key attributes identified were as follows, together with comments in relation to Luzborough Plantation:

A) Landscape and Views:

Luzborough Plantation would provide a similar experience for those who enjoy visiting woods and forests which have a mix of landscapes. The woodland habitat at the site is similar in character to many areas of the New Forest that currently receive high visitor levels. Existing rides and clearings also provide a degree openness, while there are opportunities to create additional open areas as part of future management.

B) Quiet and Not Over Crowded:

Parts of the woodland are subject to some background noise linked to traffic. However, for most of the areas traffic noise and other sources are largely absent. The woodland parcel is sufficiently large to be able to create a perception of not being over crowded for much of the year.

C) Good for walking / dog walking / cycling:

Walking and dog walking accounted for a significant proportion of the reasons for visiting the New Forest, particularly amongst the local day visitors. There is an existing network of tracks and rides within the woodland, a number of which are of a robust construction designed to accommodate forestry operations. There is potential to create a network of routes in terms of distance/time for different users, reflecting the average duration of visits to the New Forest.

D) Diversity of Wildlife and Natural Interest:

Experiencing a diversity of wildlife is one of the attributes as to why people visit the New Forest. Any alternative green space provision is unlikely to be able to match the ecological diversity of the New Forest; however, the Luzborough Plantation contains a range of wildlife habitats. Part of the woodland is designated to be of local importance for nature conservation. The long term management of the woodlands should provide an opportunity to retain and possibly enhance the diversity of wildlife.

For most visitors the specific ecological characteristics of the area will not be how they would necessarily judge the wildlife interest and enjoyment. The casual visitor is more likely to appreciate and enjoy a variety of habitat types and the sights, sounds and colours and scents of nature. This therefore supports the conclusion that this parcel of woodland is a feasibility alternative to the New Forest in ambience.

E) Woodlands are accessible:

Luzborough Plantation is in close proximity to the two major allocations proposed within Southern Test Valley, whilst being adjacent to the settlements of Romsey and North Baddesley. There would be scope to improve access to the woodland via non-car modes of travel, including the enhancement of existing routes.

5.45 In light of the comments above, Luzborough Plantation has the capability to meet those attributes identified as being the key features that attract people to the New Forest.

5.46 Given that the alternative green space to be provided via Polices COM3 and COM4 is of a scale and quality that is considered to attract users who would otherwise visit the New Forest, it can be concluded that Policies COM3 and COM4 **would not** result in an increased recreational use of the New Forest SPA / Ramsar site.

5.47 **COM1** (Housing Provision) may contribute to additional visitors to the New Forest. However, because most of the housing requirements are to be provided by allocations supported by policies that require provision of alternative green space, it is not considered that COM1 would result in significant numbers of additional visitors to the New Forest. Additionally, Policy COM1 now includes specific recognition that any such site coming forward would need to be considered against impacts on International sites. This policy hook is reiterated in the policy wording for E5 (Biodiversity), which states

Development that is likely to have a significant effect, either alone or in combination, on an international or European nature conservation designation…will need to satisfy the requirements of the Habitats Regulations.

5.48 Furthermore, in contrast with the Solent designations, it has been established that there is certainty over the quality criteria of any strategic open space flowing from implementation of this policy.

5.49 It is therefore considered that policy COM1 **would not** result in increased recreational use of the New Forest.

5.50 **COM5** is a small part of a much larger development area (Land South of Chestnut Avenue) for approximately 1,100 dwellings that is proposed by Eastleigh Borough Council in their Local Plan. The larger development proposals include all the necessary infrastructure and associated features to make the development sustainable. As identified in the policy supporting text, the Councils are working together to ensure delivery is properly phased and that development flowing from COM5 is brought forward in line with the Eastleigh development.

5.51 It is therefore concluded that COM5 **would not** result in an increased recreational use of the New Forest SPA / Ramsar site.

Solent and Southampton Water SPA / Ramsar

5.52 Almost all the estuaries in the SPA / Ramsar site are used extensively for a wide range of leisure and recreational activities, particularly water-based recreation. The Ramsar information sheet for the Solent and Southampton Water Ramsar site, lists the following as current recreation and tourism activities on the coast:

A) *Land-based recreation*: Walking including dog-walking is popular along large stretches of the coast and estuaries. The presence of country parks, NNR and LNRs on the coast also attract large numbers of people to certain locations.

Bait-digging and collection of shellfish occurs in a number of locations. Birdwatching is also a popular activity with a number of favoured locations with easy access. Some golf courses are also present.

B) *Water-based recreation*: The Solent is an internationally important centre for yachting, dinghy sailing and power-boating and national important for canoeing, and water-skiing. A small amount of hovercraft racing sometimes occurs.

C) *Wildfowling and egg collection*: Private, syndicate and club wildfowling operate on the marshes. Small-scale egg-collecting also occurs. Bait-digging and angling also occur.

D) *Air-based recreation*: There is a proposed microlighting centre within the area.

5.53 Additionally, the high degree of recreation in the Solent is accompanied by a high degree of supporting developments such as marinas, boatyards, clubs and holiday centres.

5.54 The Solent Disturbance and Mitigation Project (SDMP) was established through the Solent Forum to seek to assess what the potential effects of population growth and increased recreational visits may be on the SPA and what could potentially be done to avoid or mitigate such effects. The project studied the actual observed effects of recreational disturbance on the Solent coast and assessed the current visitor patterns to the coast. From this work, it is hoped to model potential future scenarios based, for example, on population change and climate change and the effects of potential mitigation measures, although the results do not specifically include consideration of the visitor patterns of Test Valley residents as they were not specifically included in the survey work.

5.55 The SDMP postal survey of households – which unfortunately did not include residents in Test Valley – identified that of the households which visited a coastal section by car, 90% lived within 29km of their visited coastal section, 75% lived within 18km and 50% lived within 9.5km of their visited coastal section. As 52% of all visits to the coast are known to be made by private vehicle, it is therefore possible to estimate from these figures that:

- 26% of all visits to the coast by private vehicle come from within 9.5km
- 13% come from within 18km
- 13% come from 29km or further
- Approximately 20% of those visiting within the last year up to the survey point owned a dog, and 25% of questionnaire respondents identified that dog-walking was the reason for the visit.

5.56 Figure 5.1 shows that households living more than 10km road distance away from a section, on average, make fewer than one visit per household per year to that section by car (and none on foot), with an annual rate of 0.853 and 0.339 for households in the 10-15km and 15-20km bands respectively. This further demonstrates that any new residential development in Test Valley this general distance from the coast is likely to generate few regular visits to the coast.

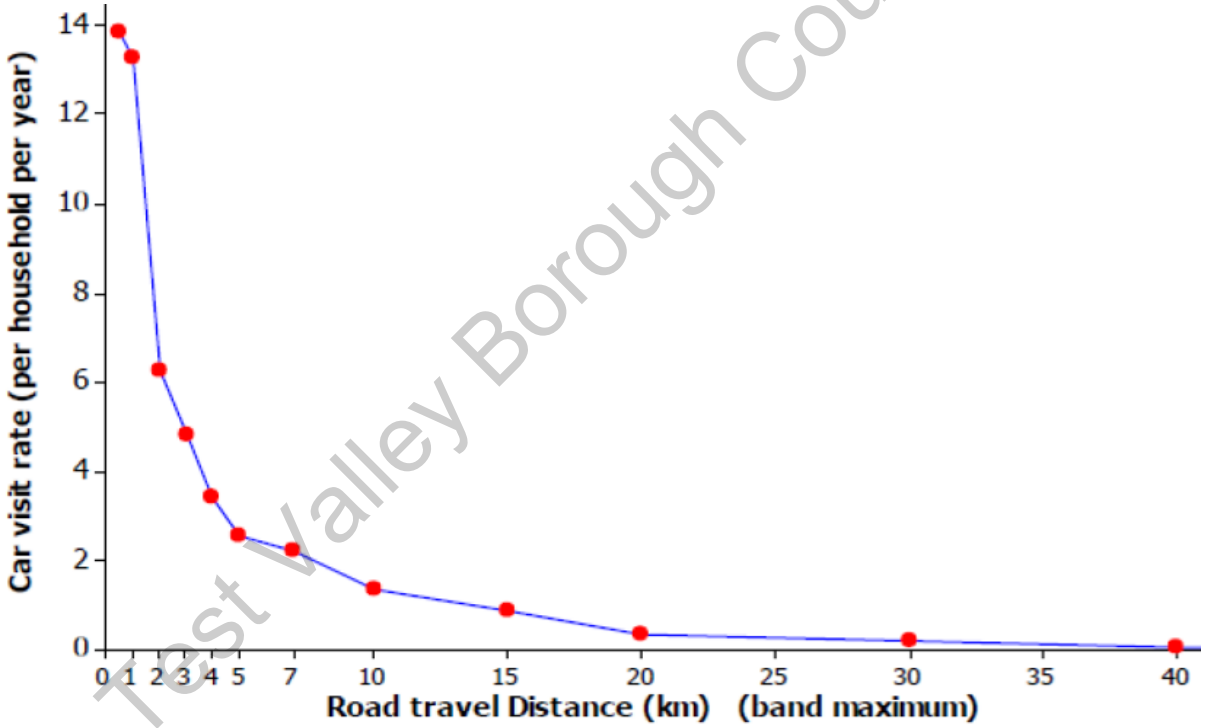


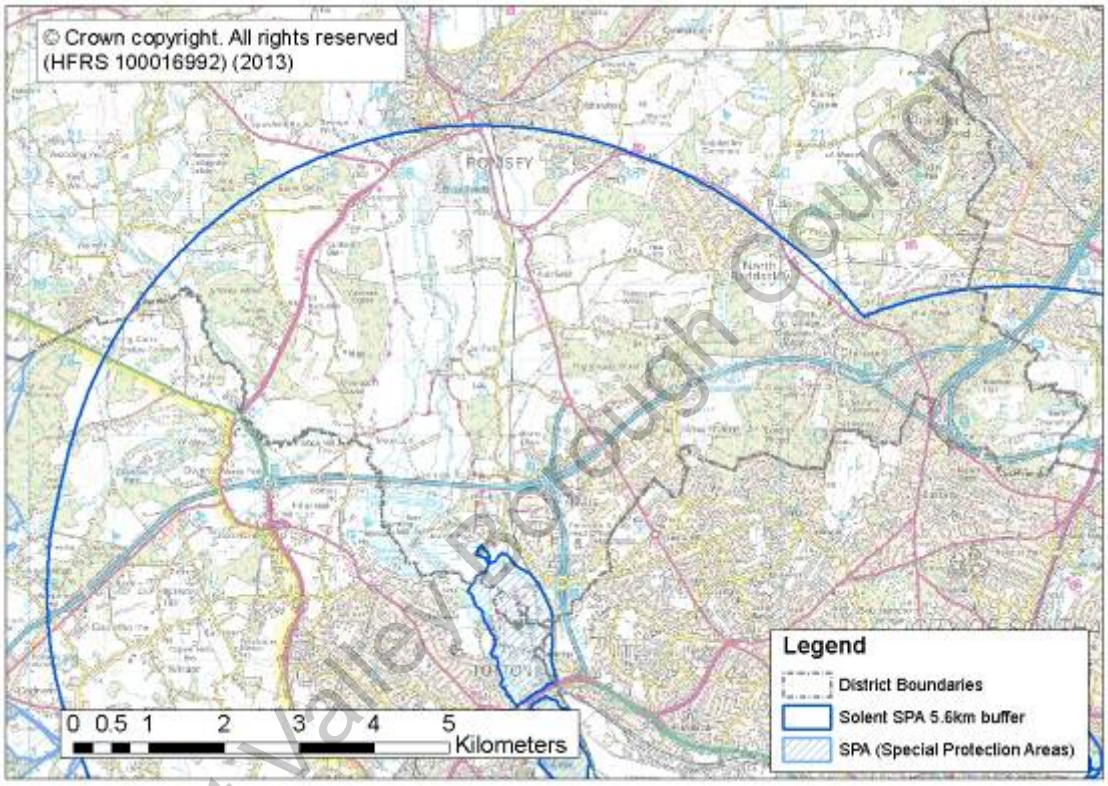
Figure 5.1: Overall car visit rates (per household per year) in relation to distance band (maxima) from the coast.[31]

5.57 A key outcome of the SDMP is the establishment of a zone extending for 5.6km around the Solent designations (see Map 5.2, below). The research identifies that 75% of visitors to the Solent designations originate from within this zone. Consequently, Natural England[32] has identified that all developments that result in a net increase in

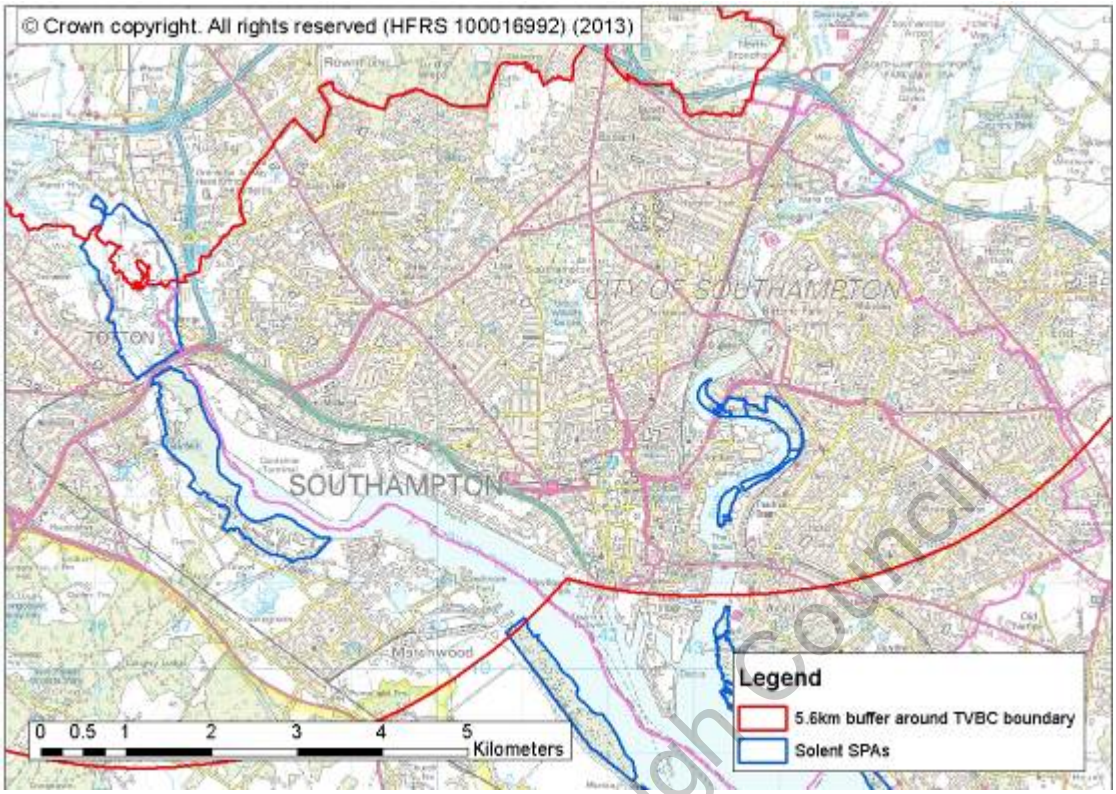
[31] Footprint Ecology and Bournemouth University (September 2011), The Solent Disturbance and Mitigation Project Phase II – Results of the Solent household survey.
[32] Natural England (May 2013), Planning Applications Affecting Solent SPAs (SPA), letter to PUSH Planning Officers Group, dated 31st May 2013

residential development within this area should be considered to have a likely significant effect on the designations when considered in combination with other plans or projects that would deliver in increased residential development.

5.58 Map 5.3 below shows the areas of the Solent designations within 5.6km of Test Valley. This shows that very small areas of the designations would be considered likely to receive any more than the approximately 2.5 visits per household per year identified as flowing from 5.6km or further in Figure 5.1. The map also shows that the intervening areas between Test Valley and the coast are largely highly urbanised, with the exception of the Lower Test (the only coastal SPA / Ramsar section within Test Valley).



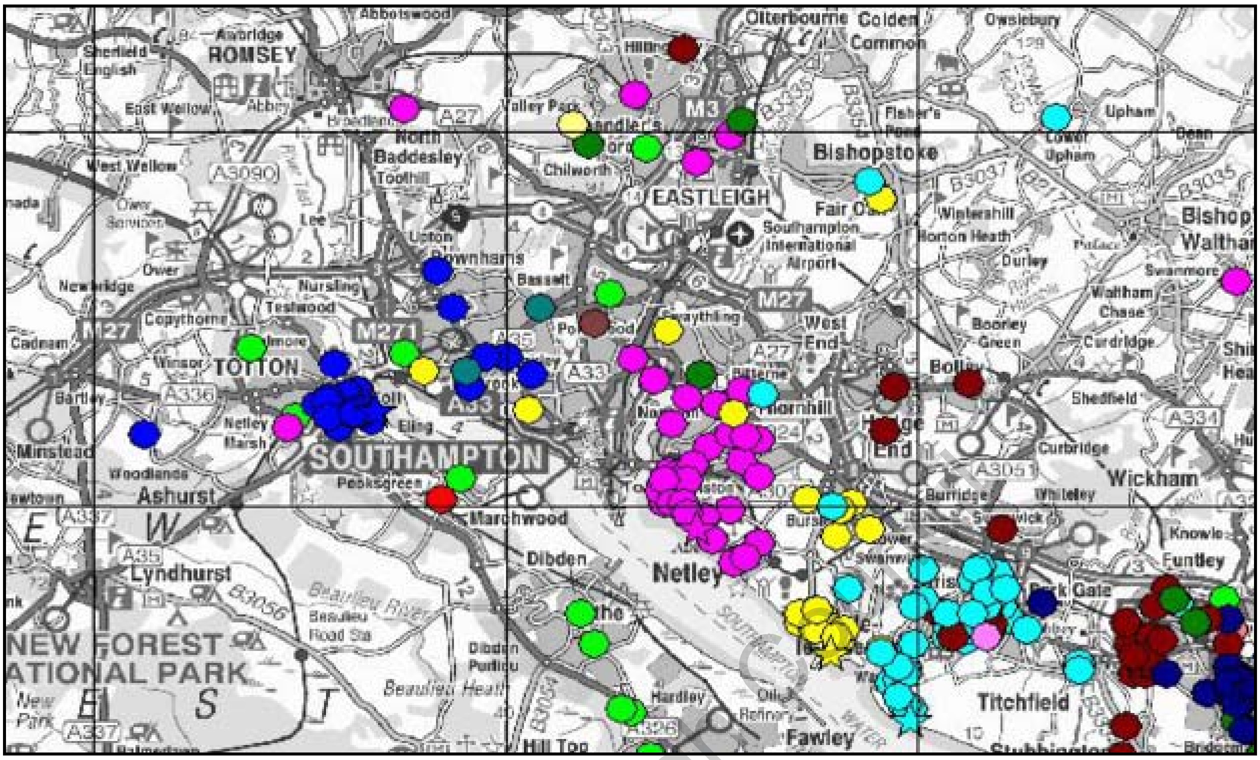
Map 5.2 – Areas of Test Valley within 5.6km of Solent International designations (Solent and Southampton Water SPA and Ramsar site)



Map 5.3 – Solent International sites (partial or whole) within 5.6km of Test Valley

5.59 In addition to the postal survey of households, the SDMP carried out questionnaire surveys of visitors at a number of sites across the Solent designations. Map 5.4 (below) demonstrates that nearly all the visitors recorded to the three nearest sections of coast within 10km of the Borough boundary came from outside Test Valley. This clearly shows that the majority of visitors to the coast would appear to visit the nearest point, hence the clustering of coloured circles near the stars of corresponding colour.

5.60 Of the extremely small number of respondents who lived in Test Valley (one in Romsey, one in Rownhams and two in Valley Park), only two (blue and dark pink circles) visited parts of the coast relatively close to their homes. The two visitors from Valley Park went further afield, to Alverbank (Gosport) and West Itchenor (Chichester).



Map 5.4 – origin postcodes for visitors to Solent sites from SDMP household survey (stars identify survey locations, circles represent corresponding origin postcodes)[33]

5.61 Of the 1,322 people interviewed during the study, only 4 (only **0.3%** of the total) came from Test Valley. This does not demonstrate that people from Test Valley do not or would not visit the Solent, nor does it demonstrate that any increase in housing in Test Valley as a result of implementation of the Plan would not result in an increase in the level of visitors to the coast. However it does clearly demonstrate in visual and quantitative terms quite how small the contribution Test Valley residents make to overall visitor pressure to the coast.

5.62 Policies **COM3** and **COM4** include provision of large areas of semi-natural open space available for extensive recreational activity in an informal natural setting. In terms of the <u>*scale*</u> or <u>*quantity*</u> of the alternative green space, these areas (Luzborough Plantation from both COM3 and 4 and in addition, for COM3, Beggarspath Wood) are considered acceptable in that they can comfortably deliver 8ha per 1,000 new residents.

5.63 In terms of <u>*quality*</u>, clearly these alternative recreational areas do not provide the same environment as the coast. It is not possible to re-create the coast within Test Valley. Therefore, those visitors that specifically visit the Solent designations for activities linked to the coastal location – for example sea views, coastal wildlife and, beach walks will not be diverted from this by newly-accessible, high-quality woodland.

[33] Fearnley, H., Clarke, R. T. & Liley, D. (2010) The Solent Disturbance &Mitigation Project. Phase II - On-site visitor survey results from the Solent region.

5.64 However, it should be recognised that a significant proportion of coastal visitors are not visiting the coast because of its coastal location. Rather, their primary purpose is to simply walk the dog or go for a general walk. For example, in the SDMP postal survey, 25% of people who visited the coast in the preceding year identified that dog-walking was the reason for the visit. Therefore it may well be the case that the new open space is sufficient to attract those people from new developments who do not specifically require a coastal location to carry out their desired activity on any given day,

5.65 Furthermore, in addition to new residents from Whitenap or Hoe Lane, it should be recognised that there may be people who currently reside close to the Luzborough Plantation who currently visit the coast on occasion and who may be attracted more often to the new alternatives.

5.66 Regarding **COM1**, given the lack of location and scale criteria for this policy, and the complexities of applying a wide-ranging study like the SDMP to a small and discrete area (and one that was not included in part of the study), it is not possible to take the development of any firm figures for an increase in visitors to the coast as a direct result of the Plan any further than the broad indications described above. COM1 is nevertheless considered to contribute to additional visitors to the SPA / Ramsar site.

5.67 The issues of quality and likely diversion from existing habits are not fully understood at present. The differences between coastal areas and the more heathland-type habitats where qualitative requirements of alternative open spaces are more readily understood mean that it is not possible at this stage to conclude that the provision of the alternative open spaces at these sites will avoid effects on the Solent and Southampton Water SPA and Ramsar site. Therefore, without the on-going research into residents' use of informal open spaces, effects on the SPA / Ramsar site from implementation of COM1, COM3 and COM4 could not be ruled out.

5.68 In contrast with the New Forest designations, it has not been established that there is certainty over the quality criteria of any alternative open space proposals to support residential development flowing from implementation of this policy.

5.69 While the on-going research into Test Valley residents use of open spaces for recreation will provide a great deal of relevant information to clarify this issue, effects on the SPA / Ramsar from implementation of COM1 cannot be ruled out at this stage in the absence of this research.

5.70 However, the Plan contains a policy dedicated to consideration of biodiversity (Policy E5). This states that:

"Development that is likely to result in a significant effect either alone or in combination on an international or European nature conservation designation, or a site proposed for such designation, will need to satisfy the requirements of the Habitats Regulations."

5.71 There is therefore some level of assurance that any development proposals flowing from COM1, COM3 and COM4 would still need to go through this process, and if these proposals did not include measures to avoid adverse effects on the SPA / Ramsar then permission could not be granted and be in accordance with the plan. However, while guidance from Natural England identifies that it can be appropriate to introduce such a

'blanket' policy to address certain elements of uncertainty related to how the plan would be implemented, it also states that policies introduced to remove uncertainty need to be targeted specifically to deal with the issue that is causing the uncertainty.

5.72 Following the Regulation 18 version, additional policy wording has been added to COM3 and COM4,

"8.0ha per 1000 population of land to be provided to mitigate the impact of the development on sites of European importance."

while the supporting text to COM1 additionally states (following the Regulation 18 consultation):

"Any site coming forward that is not an allocation will need to be considered against all relevant policies within the Local Plan and other legislation including that affecting International ecological designations".

5.73 This demonstrates that the Plan includes sufficient text in either the Policies themselves, or their supporting text, that would ensure that measures to counteract potential adverse impacts will be provided.

5.74 The strategic approach the Council is taking with respect to provision of new alternative open space as well as responding to the on-going research to support this and other similar measures will ensure that developments flowing from these policies can and will only be assessed against up to date and appropriate information relating to these issues. Developments flowing from COM1, COM3 and COM4 can therefore only be supported by the Plan where these demonstrate that such projects would not cause an increase in recreational use of the SPA / Ramsar (thus not adversely the designated site).

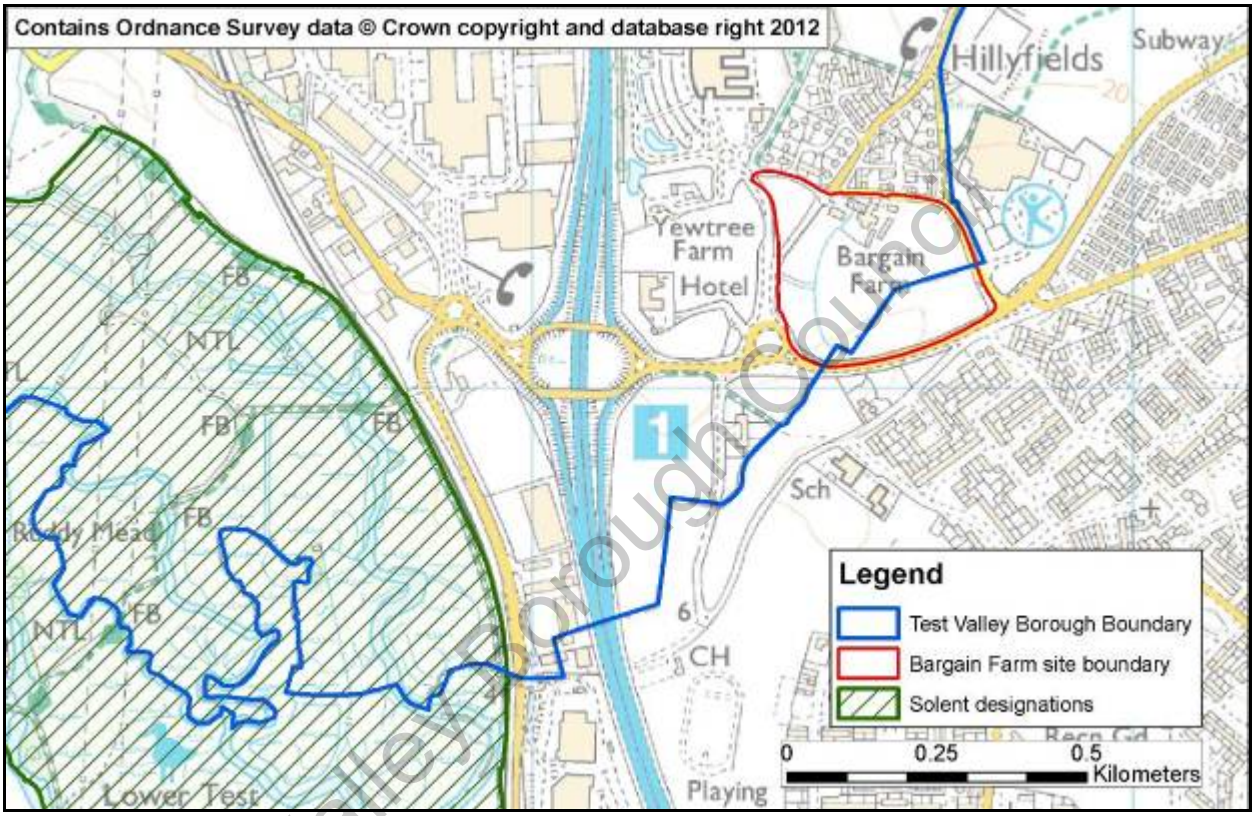
5.75 It is therefore concluded that Polices COM1, COM3 and COM4 **would not** result in increased recreational use of the SAC.

5.76 **COM5** is a small part of a much larger development area (Land South of Chestnut Avenue) for approximately 1,100 dwellings that is proposed by Eastleigh Borough Council in their Local Plan. The larger development proposals include all the necessary infrastructure and associated features to make the development sustainable. As identified in the policy supporting text, the Councils are working together to ensure delivery is properly phased and that development flowing from COM5 is brought forward in line with the Eastleigh development.

5.77 It is therefore concluded that COM5 **would not** result in an increased recreational use of the Solent and Southampton Water SPA / Ramsar site.

5.78 Policy **T3** (Park and Ride at Nursling) was also screened in as having a likely significant effect specifically on the Solent and Southampton Water SPA / Ramsar site. This is because it provides a large car park in close proximity to the Lower Test Marshes area of the SPA / Ramsar and it was considered that there may be potential for people to use the Park and Ride car park to visit the SPA / Ramsar.

5.79 Map 5.5 (below) shows that people walking to the SPA from the Park and Ride facility would need to walk nearly 1km along a busy spur road and across a busy motorway junction that has no footway. It is also likely that the Park and Ride car park would require payment. It is therefore considered that these factors (distance, lack of safe walkway and cost) would preclude the car park from being used by potential visitors to the SPA at this point. It is therefore concluded that T3 **would not** result in an increased recreational use of the Solent and Southampton Water SPA / Ramsar site



Map 5.5 – Bargain Farm (Policy T3) in relation to Solent and Southampton Water SPA

5.80 It is therefore concluded that it is not necessary to further consider the implications of the Plan on the conservation objectives of the Solent and Southampton Water SPA / Ramsar site sites with respect to recreational disturbance arising from COM1, COM3 and COM4.

Conclusions

5.81 There are elements of uncertainty that prevent a more robust assessment of the effects of the plan on Emer Bog SAC and Solent and Southampton Water SPA and Ramsar site. Ways of addressing uncertainty are discussed in more detail in Chapter 2 (paragraphs 2.10 to 2.22). With respect to recreational impacts on these specific sites:

A) Scientific Uncertainty

5.82 It is proposed to reduce the level of scientific uncertainty through completing the planned research into how Test Valley residents use semi-natural open space to provide certainty over the qualities required of strategic open space to be provided to address potential rises in visitor use of affected International sites. With respect to Emer Bog, the Council is also committed to working with the Wildlife Trust and Natural England and responding to the findings of the research the Council is undertaking.

B) Implementation Uncertainty

5.83 In response to the uncertainty over the implementation of the policy and the lack of, and emerging, evidence base at this stage, the wording to policies COM1, COM3 and COM4 have been amended to specifically address these issues. This demonstrates that regardless of how these policies could be implemented, it can be reasonably concluded that developments that could adversely affect an International site would not draw support from this policy.

C) Planning Hierarchy

5.84 It is also appropriate to consider deferring assessments of projects flowing from COM1, COM3 and COM4 to a lower tier at planning application stage. It is however only acceptable to defer down to a lower tier assessment if the following conditions are met:

- *Where the higher tier plan cannot reasonably assess the effects in any meaningful way.*
  - As discussed, it is not possible to reasonably assess the effects of the policy due to the large areas of scientific and implementation uncertainty.
- *Where the lower-tier plan can identify more precisely the nature, scale or location of development, and thus its potential effects.*
  - HRA of a proposal at a lower level is able to change the proposal if an adverse effect on site integrity cannot be ruled out, because the lower tier plan is free to change the nature and/or scale and/or location of the proposal in order to avoid adverse effects on the integrity of the International sites.
- *Where the HRA of the plan or project at the lower tier is required as a matter of law and policy*
  - As discussed, there is a policy requirement under E5, as well as new text in COM1, COM3 and COM4 specifically relating to addressing potential impacts on International sites form these policies. Thus there is a requirement to undertake HRA as a matter of policy, as well as clearly a matter of national and international law.

5.85 In conclusion, due to the necessary text having been added to the relevant policies, and the on-going research into visitor use of open spaces such as Emer Bog and the nearby coastal areas to enable the Council to consider the development proposals at planning application stage as required by the policies, it is considered that implementation of policies COM1, COM3, COM4 and COM5, and hence the Test Valley Revised Local

Plan DPD will not adversely affect the integrity of Emer Bog SAC, or the Solent and Southampton Water SPA / Ramsar site.

6 Water Resources

Effects of the Plan

6.1 The south of England is an area of identified water stress and within the region Hampshire and particularly the Test Valley has been identified as under particular water stress by the Environment Agency:

"The South East River Basin District is currently water stressed both in terms of overall water resources, and the public water supply. Climate change is expected to exacerbate water stress in the region. There is potentially enough water in the South East to meet the rising demand for new housing and domestic consumption, but only with the timely provision of new water supplies and high water efficiency savings in existing and new homes"[34].

"Pressures are greatest in South East and Eastern England because of them being the driest parts of England and Wales, coupled with the highest population density and household water use...Over the next 30 years, there will be increasing pressures from the rising population and associated development. Looking further ahead, the impact of climate change could have a major impact on the water that will be available for all uses"[35].

6.2 The Appropriate Assessment (AA) of the South East Plan[36] identified that there is less water available per person in the South East and identified the Test Valley as an area where water resources are under great pressure. As a result of these assessments the AA went on to recommend that (pending feedback from the Environment Agency), housing allocations in 12 districts – including Test Valley should be reconsidered due to water resource constraints, further identifying that particularly acute problems are likely in South Hampshire.

6.3 The response of the Secretary of State to these findings and recommendations was to amend Policy NRM1 of the South East Plan, to:

"Direct new development to areas where adequate water supply can be guaranteed from existing and potential' water supply infrastructure. Where this is not possible, development should be phased so that sustainable new capacity can be provided ahead of new development."

6.4 While the South East Plan has been revoked, the findings of the Sustainability Appraisal and Appropriate Assessment of the South East Plan raise environmental concerns that remain valid and relevant. Even before the potential effects of new development are considered, the water environment is under increasing pressure as a result of:

[34] http://publications.environment-agency.gov.uk/PDF/GESO0910BSTH-E-E.pdf
[35] Environment Agency (2008), *Water resources in England and Wales- current state and future pressures*, via http://publications.environment-agency.gov.uk/PDF/GEHO1208BPAS-E-E.pdf
[36] Scott-Wilson/Levett – Therivel (2008), *Regional Spatial Strategy for the South East: Sustainability Appraisal and Habitats Regulations Assessment / Appropriate Assessment of the Secretary of State's Proposed Changes*.

- **Climate change** – the climate change scenarios for the South East demonstrate that additional pressures on an already stressed water environment can be expected,

- **Population growth** – the population of Hampshire is forecast to grow by 121,330 by 2026 (from a baseline of 2006) of which 57,260 is projected to be natural population growth and 65,070 net migration into the county[37] For Test Valley the projections are for a population increase of approximately 23,000 by 2029 (from 2011 baseline), the majority of which is likely to come from net migration.

- **Water consumption rates** – these are higher in the South East of England Average water consumption per person was 156 litres compared to the national average of 148 litres/person/day in England and Wales[38]. For 2011/12, average water consumption in the Andover water resource zone was 151 litres/person/day and the consumption was 152 litres/person/day in the Hampshire South water resource zone[39]. However, household water use in unmetered properties is higher.

6.5 The Local Plan has a specific policy (Policy E7) relating to water management. The supporting text to this policy includes the following (with additional emphasis):

"Water resources within Test Valley are largely identified as having restricted water available for licensing purposes at moderate and low flows[40]. On this basis the Environment Agency has advised that ***there is no likelihood of increasing the amount of water licensed to be taken out of local rivers or aquifers****. Development will have to be planned within existing water resources, it is therefore particularly important to carefully manage how we use water. The Council will work with water utility providers and the Environment Agency to ensure that new developments (including their phasing) do not exceed water supply, waste water treatment and sewerage capacity."*

"Promoting more efficient use of water will be essential to help balance the needs of the community and the environment."

"It will also be important to ensure the delivery of development is phased to take account of any ecological or capacity constraints."

Conclusions

6.6 Given that the policy relating to water management specifically states that there is no likelihood of increasing the amount of water taken out of local rivers or aquifers, it can be concluded that the Plan **would not** adversely affect any International site through a reduction in water resource as a result of increased abstraction.

[37] Hampshire County Council (2012), *Long Term Projections*, via http://www3.hants.gov.uk/factsandfigures/population-statistics/pop-estimates/long-term-proj.htm
[38] Environment Agency, (2010), *State of the Environment - South East England*, via http://www.environment-agency.gov.uk/static/documents/Business/SoE_March_2010.pdf
[39] Provided by Southern Water, 2012.More information is provided in chapter 5 of the Sustainability Appraisal.
[40] Test and Itchen Abstraction Licensing Strategy, Environment Agency, 2013.

6.7 It is therefore not necessary to consider the implications on the conservation objectives of International sites as the plan would not give rise to any effects on these sites.

7 Water Quality

The effects of the Plan

7.1 Water quality is critical to supporting life. Rainfall draining into streams and rivers and percolating into groundwater, runs off or drains through the catchment soils and can therefore collect for example agricultural fertilisers and pesticides, and in urban areas, petrochemicals. Waste water that is treated from sewers is returned to the catchment, often into the same rivers from which it was originally abstracted for consumption. The water in the ground and in watercourses is therefore subject to a wide range of chemical contaminants that can reduce its quality.

7.2 The key water quality issues associated with development are linked to sewage treatment. The greater the population and the more water that is consumed, the more water has to be treated and returned to the catchment. In times of flood, combined sewers (those that collect and drain surface water and sewage) may overflow resulting in raw untreated sewage being discharged into rivers and streams. Where those receiving watercourses are hydrologically and ecologically linked to International sites, the additional nutrients entering the watercourse either as treated wastewater or untreated overflow can affect the sites' designated features.

Emer Bog

7.3 At Emer Bog, there is variation in the pH of water across the site from very acidic to mildly alkaline. The water is generally very rich in nitrogen and phosphorous. The interest feature has been affected by high levels of nitrates and phosphates believed to arise from adjacent land. The EA Review of Consent (RoC) process concluded that no licensed abstractions or discharges were outside of target parameters and none were identified as requiring revocation or modification. Hydro-ecological studies by Ron Allen (2003)[41] concluded that:

"High fertility (nitrate and phosphate levels) in the mire water is likely to be mostly generated within the mire system, with only small inputs from surface waters arising from agricultural land outside of the site. The reason for the high fertility remains unknown, although it could be the result of accumulations from run-off from the agricultural land over time."

7.4 Emer Bog does not receive water from watercourses outside the identified Zone of Discharge Constraint. There are no discharge points within this Zone. Therefore the SAC will not receive any water that has been discharged by any sewage treatment works. The only source of waterborne pollution into the Bog is considered to be from agricultural sources. While this is of concern, and contributes to the poor conservation status of the SAC, the Plan does not include any policies that would give rise to increases in agricultural pollution within the Zone.

[41] Ron Allen (The Environmental Project Consulting Group) (2003) Review of Consents, Surface Water Quality and Hydro-Ecological Regime of Emer Bog cSAC.

River Itchen

7.5 The majority of the River Itchen's length is currently assessed by the Environment Agency as having 'poor' ecological, and 'failed' chemical status under the Water Framework Directive. The EA has undertaken a Review of Consents in relation to the River Itchen SAC, in accordance with Regulation 50 of the Habitats Regulations 1994. This concluded:

Consideration was given to 115 discharge consents in the Appropriate Assessment. Of these, 64 were considered to have no adverse effect on the SAC and further consideration was given to the remaining 51 consents in Stage 4. Stage 4 for water quality was undertaken in-combination with water resources abstraction licences.

7.6 Of the 51 discharge consents appraised at Stage 4:

- 5 consents have been revoked since the end of stage 3 outside of the Review of Consents
- 23 consents will be affirmed
- 3 consents will be modified if still required, in line with consenting policy, otherwise revoked
- 2 consents have the stage 4 decision pending
- 19 consents will be modified

7.7 One of the consents to be modified is the major Chickenhall Lane Eastleigh Sewage Treatment Works. This is potentially the point of treatment for any new development in Test Valley Borough within the catchment of this works.

7.8 The EA review concluded that:

We will affirm the Eastleigh (Chickenhall) STW discharge consent, with regards to EDCs for the River Itchen SAC, at this time. Subject to Regulation 51(3) EDC Monitoring Programme. Further action if necessary[42]*.*

7.9 However, it should be noted that the Chickenhall STW is the only works that discharges into the Itchen that receives wastewater from areas within Test Valley, and only receives such water from a very small area.

7.10 The impacts of new development on water quality are carefully regulated through existing regulatory controls. In addition, the Local Plan has a specific policy (Policy E7) relating to water management. The supporting text to this policy includes the following (with additional emphasis):

[42] http://www.environment-agency.gov.uk/static/documents/Business/Non-technical_summary_Itchen.pdf

There are legal requirements through the Water Framework Directive to give full consideration to the quality and quantity of ground and surface water bodies in order to aim to achieve 'good' status or 'good ecological potential' in all water bodies by 2027[43]. The Council has a role in supporting the delivery of these objectives. ***It is essential that development does not cause deterioration in the status of water bodies****. Where possible, schemes to enhance the status of the water bodies should be undertaken.*

Conclusions

7.11 Emer Bog does not receive water from watercourses outside the identified Zone of Discharge Constraint. There are no discharge points within this Zone. Therefore the SAC will not receive any water that has been discharged by any sewage treatment works. Therefore it can reasonably be concluded that any decreases in water quality arising from the plan would not affect Emer Bog.

7.12 Given the limited potential for new development to be within the catchment for Chickenhall STW, and that the Plan explicitly requires that development does not cause deterioration of water bodies with respect to declines in water quality it can be concluded that the Plan would not adversely affect any International site through a reduction in water quality.

7.13 It is therefore not necessary to consider the implications of the Plan on the conservation objectives of Emer Bog SAC and River Itchen SAC with respect to water quality.

[43] For more information see the River Basin Management Plan South East River Basin District, Environment Agency, 2009.

8 Construction

Effects of the Plan

8.1 Loss of habitat through construction has been identified as potentially affecting Mottisfont Bats SAC when the nature of the environment changes, as a result of development flowing from implementation of the Plan from, for example, a semi-natural habitat that has some biodiversity value, to a less valuable habitat. Where the value of the original habitat is partly or wholly related to an International site, the construction may potentially have an adverse effect on that site.

8.2 Policies COM1, COM3 and LHW2 have been screened as having a likely significant effect on Mottisfont Bats through impacts to off-site.

COM1 – Housing Provision

8.3 As discussed extensively above in relation to recreational disturbance concerns, there are no location or scale criteria within COM1 aside from the general 67:33 split between Northern and Southern Test Valley. Therefore, for similar reasons, it cannot be ruled out that development proposals may come forward as a result of the implementation of the Plan that would directly or indirectly result in deterioration of habitats that are functionally linked to the SAC.

8.4 However, the Plan contains a policy dedicated to consideration of biodiversity (Policy E5). This states that:

"Development that is likely to result in a significant effect either alone or in combination on an international or European nature conservation designation, or a site proposed for such designation, will need to satisfy the requirements of the Habitats Regulations."

8.5 There is therefore some level of assurance that any development proposals flowing from COM1 would still need to go through this process, and if these proposals did not include measures to avoid adverse effects on the SAC then permission could not be granted and be in accordance with the plan. However, while guidance from Natural England identifies that it can be appropriate to introduce such a 'blanket' policy to address certain elements of uncertainty related to how the plan would be implemented, it also states that policies introduced to remove uncertainty need to be targeted specifically to deal with the issue that is causing the uncertainty.

8.6 Following the Regulation 18 version, the supporting text to COM1 additionally states:

"Any site coming forward that is not an allocation will need to be considered against all relevant policies within the Local Plan and other legislation including that effecting International ecological designations".

8.7 This demonstrates that the Plan includes sufficient text in either the Policies themselves, or their supporting text, that would ensure that measures to counteract potential adverse impacts will be provided.

8.8 Furthermore, as a tool to ensure that development proposals come forward with sufficient information to allow the planning authority to consider impacts to biodiversity and that proposals are in accordance with policy, a Biodiversity Checklist[44], specific to Test Valley Borough Council has been developed and is currently in use. The Checklist was introduced in November 2011, prior to the publication of the NPPF. It is therefore currently under review to amend references to the superseded PPS9. However, the current Checklist includes the text:

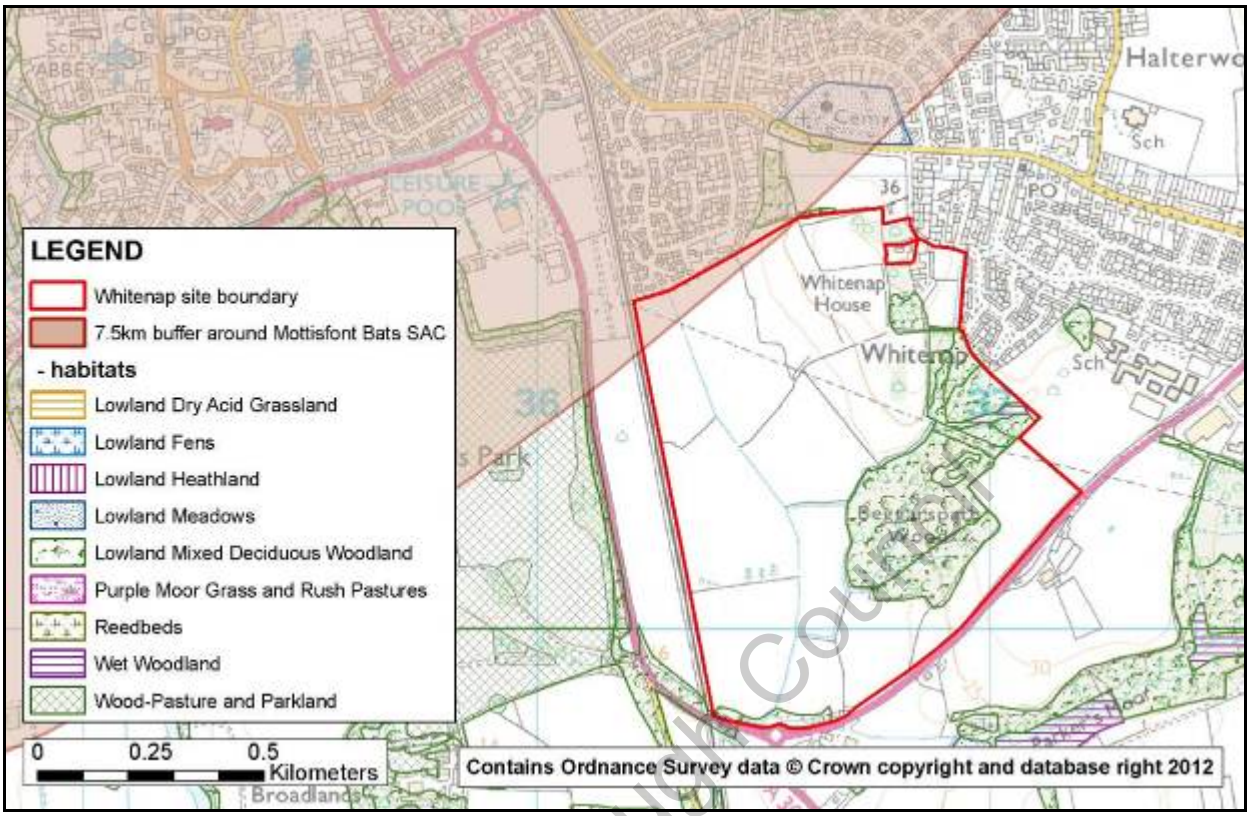
"If the above search [for International sites close to the application] identifies that the proposals are within 7.5km of the Mottisfont Bats SAC and the proposals affect any significant trees, watercourses, lakes, deciduous woodland, hedgerows or meadows or other more ecologically diverse grassland then further consideration of potential impacts may be required. You should discuss this with your ecologist".

8.9 Therefore, it can be concluded that effects that could adversely affect Mottisfont Bats could not flow from implementation of Policy COM3. It is therefore not necessary to consider the implications of COM3 on the conservation objectives of Mottisfont Bats SAC.

COM3 – New Neighbourhood at Whitenap, Romsey

8.10 Part of the Whitenap allocation to be implemented through Policy COM3 is within 7.5km of Mottisfont. However, examination of maps of the site reveals that there is limited habitat affected by the allocation that could potentially be linked to the SAC. This is shown on Map 8.1, below.

[44] http://www.testvalley.gov.uk/assets/files/283/Biodiversity-Checklist-for-Full-Applics.pdf



Map 8.1 – areas of COM3 within 7.5km of Mottisfont showing habitat present

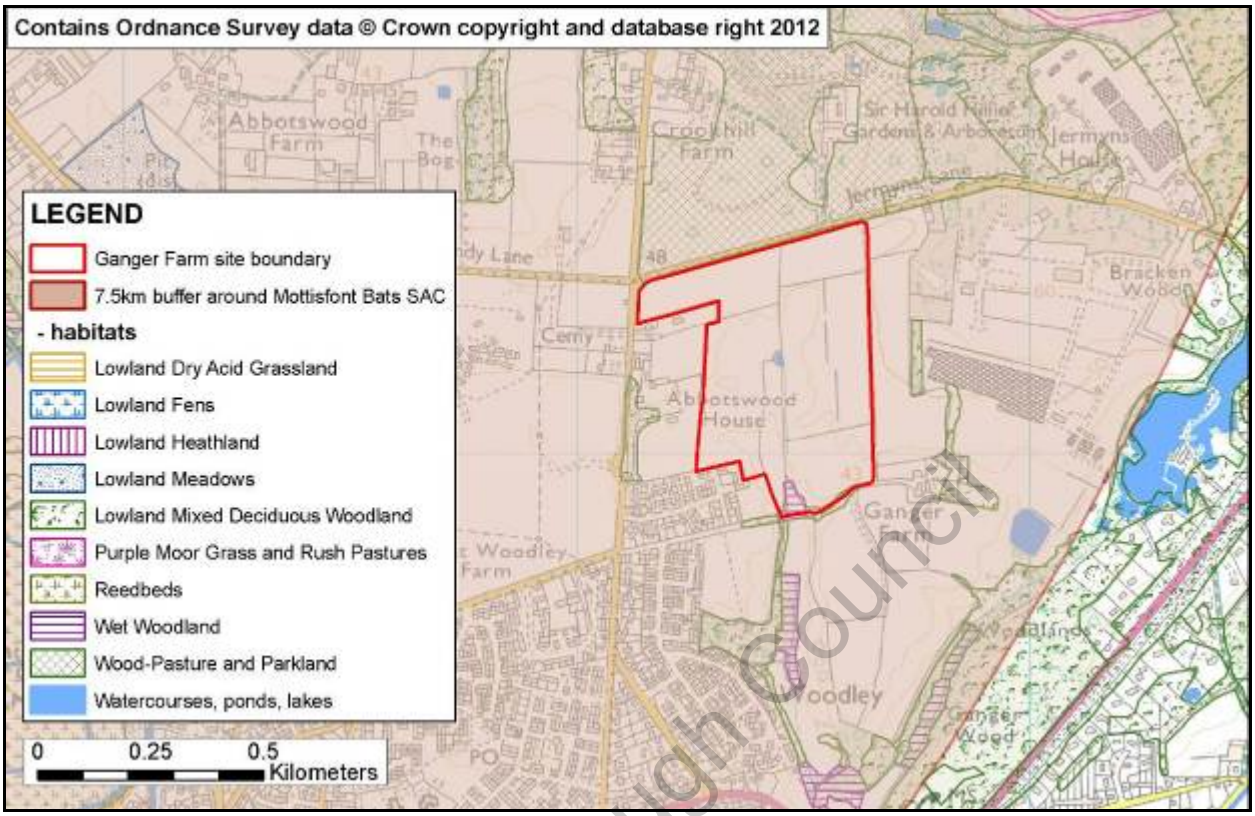
8.11 Additionally, COM3 in conjunction with Policy E5 include text to specifically protect hedges through the retention of existing landscape features / green corridors and also seeks to enhance these.

8.12 Therefore, it can be concluded that effects that could adversely affect Mottisfont Bats could not flow from implementation of Policy COM3. It is therefore not necessary to consider the implications of COM3 on the conservation objectives of Mottisfont Bats SAC.

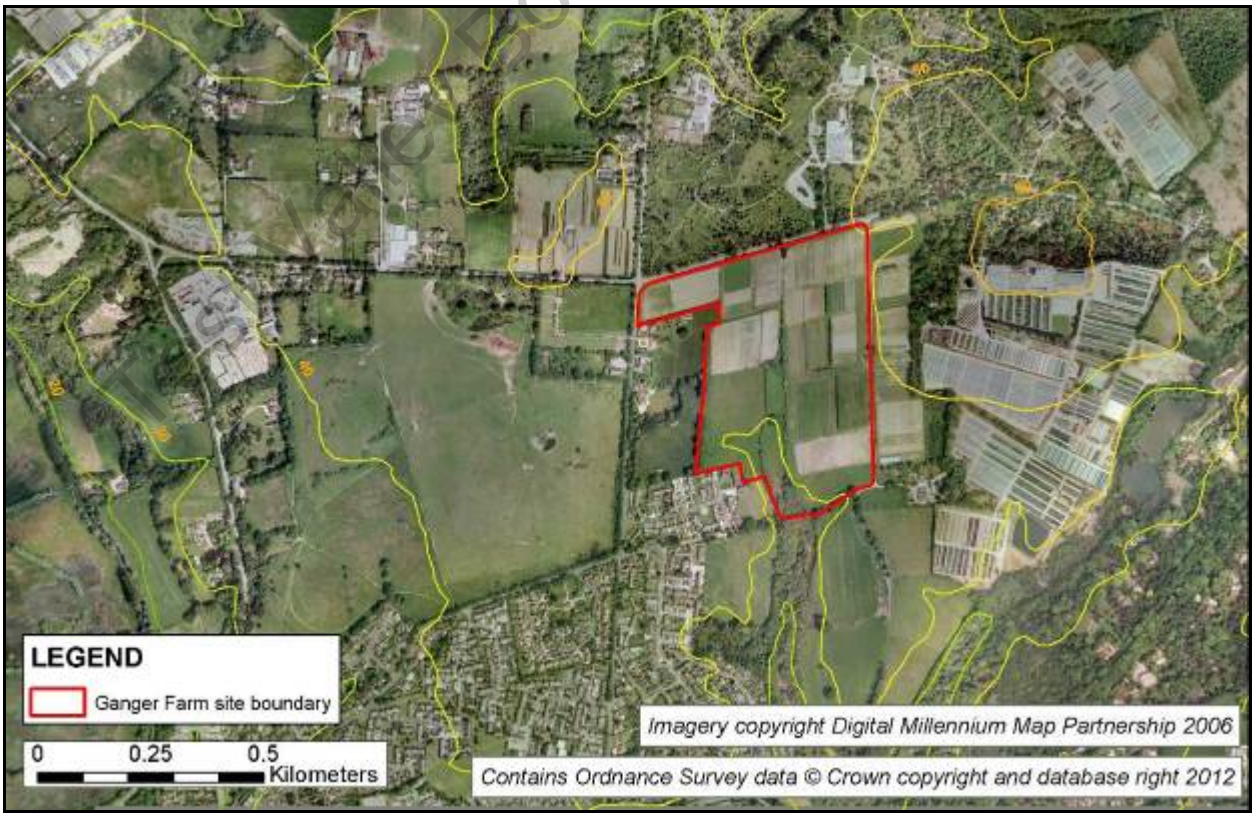
LHW2 – Ganger Farm, Romsey

8.13 The Ganger Farm site – allocated for provision of new sports facilities – is wholly within 7.5km of Mottisfont Bats SAC. Additionally, this allocation for sports facilities specifically includes provision of floodlighting – therefore, even if the land directly within any development footprint is not a functionally linked in a significant way to Mottisfont, the floodlighting may affect a far wider area through illumination of adjacent habitat used by bats for roosting, foraging and / or commuting.

8.14 Examination of maps and aerial photos (see Maps 8.2 and 8.3) identifies that the majority of habitat on site is sub-optimal bat foraging habitat, comprising mainly intensive horticultural land. There is a strip of woodland (including wet woodland) along the south of the site, as well as a pond to the centre of the site. The key features in terms of potential bat use would be the woodland along the south of the site and mature trees around the site boundaries and in adjacent land.



Map 8.2 – areas of LHW2 within 7.5km of Mottisfont showing habitat present



Map 8.3 – Aerial photo and contours for Ganger Farm

8.15 These trees may form part of the wider local foraging and commuting resource for the Mottisfont bat population. An additional concern, and one that is less well understood, is that the population at Mottisfont is a maternity colony, comprising female bats and, during the nursery period, their offspring. No male barbastelle bat roosts have been identified within the SAC boundary. Therefore it is likely that male barbastelles are found elsewhere in the surrounding landscape, outside the SAC boundary. Barbastelles favour old tree roosts, such as may be found in habitats adjacent to Ganger Farm. If floodlighting were to illuminate bat roosts then the roosts will become unusable, and if these roosts were used by male (or indeed non-breeding female) barbastelle bats associated with the SAC then this would be considered to have an adverse effect on the SAC.

8.16 Therefore, in the absence of any specific measures within the Plan, it would appear that it is not possible to rule out an adverse effect on Mottisfont Bats SAC.

8.17 However, the supporting text for LHW2 states:

'To allow the use of the pitches during the winter months and early evenings, there may be a requirement for floodlighting. The proposal should avoid impacts on the Arboretum, nearby residents and biodiversity including Mottisfont Bats SAC, particularly in relation to floodlighting.'

8.18 Therefore the potential impacts on Mottisfont Bats SAC from the construction of the Ganger Farm facilities is explicitly recognised in the policy.

8.19 The policy and supporting text also identifies that a 20m landscape buffer would be required to maintain the setting of the adjacent Sir Harold Hiller Gardens and Arboretum, a registered historic park and garden.

8.20 Therefore, it can be concluded that effects that could adversely affect Mottisfont Bats could not flow from proper implementation of Policy LHW2. It is therefore not necessary to consider the implications of LHW2 on the conservation objectives of Mottisfont Bats SAC.

Conclusions

8.21 The Plan contains policy wording and supporting text to provide certainty that developments flowing from the implementation of Policies COM1, COM3 and LHW2 will not be supported by the Plan. Additionally, Development Management tools are in place to ensure that developments flowing from COM1 – which has no location criteria – will not be progressed unless sufficient information is provided to assess the proposals against the International site on a case-by-case basis.

8.22 It is therefore not necessary to consider the implications of the Plan on the conservation objectives of Mottisfont Bats SAC with respect to construction impacts.

9 Atmospheric pollution

Effects of the Plan

9.1 Policies relating to housing in Southern Test Valley (COM1, 3, 4 and 5), employment (LE3, 4, 5 and 6) have been assessed as having a likely significant effect on the Solent Maritime SAC and Solent and Southampton Water SPA / Ramsar. These policies will result in an increase in residents and commercial activity close to the International sites, and these sites are in close proximity to major elements of the local road network. As such, there is the potential for roads that pass close to these International sites to experience an increase in traffic as a result on the implementation of the Plan and consequently localised increases in airborne pollutants.

9.2 The main pollutants of concern for International sites are oxides of nitrogen (atmospheric and deposition), ammonia, acid deposition and sulphur dioxide.

9.3 **Atmospheric nitrogen oxides (NOx)** and **nitrogen deposition (NO_2)** can have a directly toxic effect upon vegetation, with greater NO_x concentrations (measured in $\mu g/m^3$) within the atmosphere leading to greater rates of nitrogen deposition to soils. The critical level for NOx is based on the sum of the NO and NO_2 concentrations as there is insufficient knowledge to establish separate critical levels for the two pollutants.

9.4 Since the proportions of NO and NO_2 contributing to NO_x is often unknown, the critical level is expressed in terms of equivalent NO_2 concentrations. An increase in the deposition of nitrogen from the atmosphere to soils (measured in kg N/ha/year) is generally regarded to lead to an increase in soil fertility, which can have a significant effect on the quality of many semi-natural habitats where species diversity of the vegetation community results from substrates low in nitrogen and where competition from more vigorous species is reduced. Therefore increases in nitrogen can lead to significant changes in the vegetation community.

9.5 **Ammonia** emissions are dominated by agriculture, with some chemical processes also making notable contributions. Additionally, greater ammonia concentrations within the atmosphere will lead to greater rates of nitrogen deposition to soils.

9.6 NO_x and SO_2 levels in the air also lead to increased **acid deposition** which can also affect plants and animals on land and in water – especially those restricted to a narrow pH range. However, while acid deposition can be caused by road traffic, the majority comes from electricity generation.

9.7 **Sulphur dioxide (SO_2)** emissions are linked with serious toxic effects on sensitive species, especially lichens, although this is not an identified concern for the sites in question.

9.8 Based on these considerations, it is unlikely that material increases in SO_2 or NH_3 emissions will be associated with the Plan. NO_x and NO_2 emissions, however, are dominated by the output of vehicle exhausts (more than half of all emissions). Emissions of NO_x and NO_2 could therefore be reasonably expected to increase as a result of greater vehicle use as an indirect effect of any additional development – both

residential and any employment or transport developments resulting in an increase in road transport.

9.9 As discussed, the Plan needs to be considered as a whole as well as separate elements. The Revised Local Plan's stated aims within the Transport element (Chapter 8 of the Plan) is to improve accessibility to services, reduce the need to travel, manage congestion, and achieve more sustainable travel behaviour through the policies and proposals within the Local Plan. This includes concentrating development at sustainable locations and encouraging sustainable modes of transport primarily through the preparation of Travel Plans, Council's Cycle Strategy and Access Plans. The presence of a sustainable and functioning transport system was one of the guiding principles behind the development of the settlement hierarchy promoted by Policy COM2.

9.10 The Plan also states that development proposals would need to demonstrate that the intended use and occupiers had a reasonable prospect of a choice of modes of transport to key destinations. Where it is proposed to improve the transport credentials of a site by contributions to the transport infrastructure serving it the feasibility and sustainability of these would need to be demonstrated by the applicant or promoter of the project.

9.11 With respect to specific allocations, the residential allocations at Whitenap (COM3), Hoe Lane (COM4) and Stoneham Park (COM5) include policy elements to secure good pedestrian and cycle links.

9.12 The employment allocation at Adanac Park (LE6) is for corporate office buildings so will not result in significant increases in commercial vehicles, and instead will employ residents from the surrounding area. Given that there is a clear commitment behind the Council's employment strategy to reduce out-commuting and provide employment for Test Valley residents, it is considered that the majority of traffic generated by LE6 will flow from north of the allocation site, and would not result in any more than a *de minimis* increase in commuter traffic within 200m of the International sites. Additionally, policies LE 3, 4 and 5, which are all for employment use sites close to the M27 / M271, are considered likely to result in additional road transport on nearby major road networks, particularly between these sites and Southampton. The precautionary principle must apply, and at the present time there is insufficient information to be able to conclude the policy would have no adverse effect.

9.13 COM1 provides for an increase in housing across the Borough and, as previously described, includes no location or scale criteria other than the 66:33 split between Northern and Southern Test Valley. Therefore, on the basis of the precautionary principle, it cannot be ruled out that a large amount of this housing would be within a location where road commuting and general road use would not take residents close to designated sites.

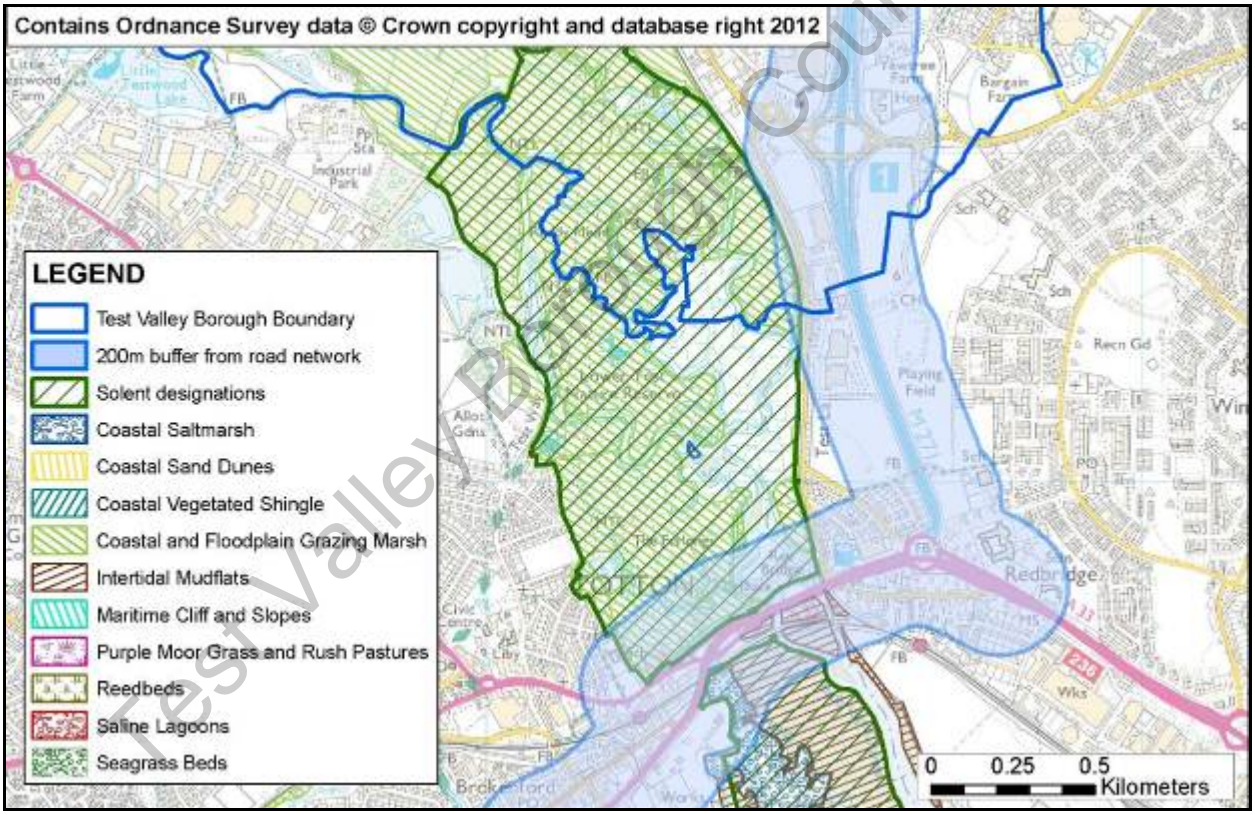
9.14 While it is clear that the Plan includes various elements either generally, or specific to particular potential impact sources (i.e. the allocation sites) to address concerns over increasing road traffic during the Plan period, it is not possible to completely rule out that the effects of increased transport emissions flowing from the implementation of the Plan would not adversely affect International sites. Further consideration therefore

needs to be given to the implications of these air quality effects on sites' conservation objectives.

Implications for the conservation objectives

9.15 Beyond 200m, the effects of emissions from road traffic sources diminish to the equivalent of background levels[45]. Therefore, it is appropriate that the scope of this assessment is focussed on those effects flowing from Plan elements that have the potential to increase road traffic within 200m of International sites.

9.16 The only International site within 200m of major road networks likely to be experience a significant increase in road traffic as a result of the Plan is the Solent Maritime SAC and the Solent and Southampton Water Ramsar site. Map 9.1 shows those areas of the SAC and Ramsar site that are within 200m of major roads in Test Valley.



Map 9.1 – Solent International designations, habitats and proximity to major transport routes (200m buffer applied to nearby major road sections)

9.17 The conservation objectives for the Solent Maritime SAC are:

Avoid the deterioration of the qualifying natural habitats and the habitats of qualifying species, and the significant disturbance of those qualifying species, ensuring the

[45] Laxen D and Wilson P (2002), *A New Approach to Deriving NO_2 from NO_x for Air Quality Assessment of Roads.* Report prepared on behalf of Defra and the devolved administrations

integrity of the site is maintained and the site makes a full contribution to achieving Favourable Conservation Status of each of the qualifying features.

Subject to natural change, to maintain or restore:

- *The extent and distribution of qualifying natural habitats and habitats of qualifying species;*
- *The structure and function (including typical species) of qualifying natural habitats and habitats of qualifying species;*
- *The supporting processes on which qualifying natural habitats and habitats of qualifying species rely;*
- *The populations of qualifying species;*
- *The distribution of qualifying species within the site.*

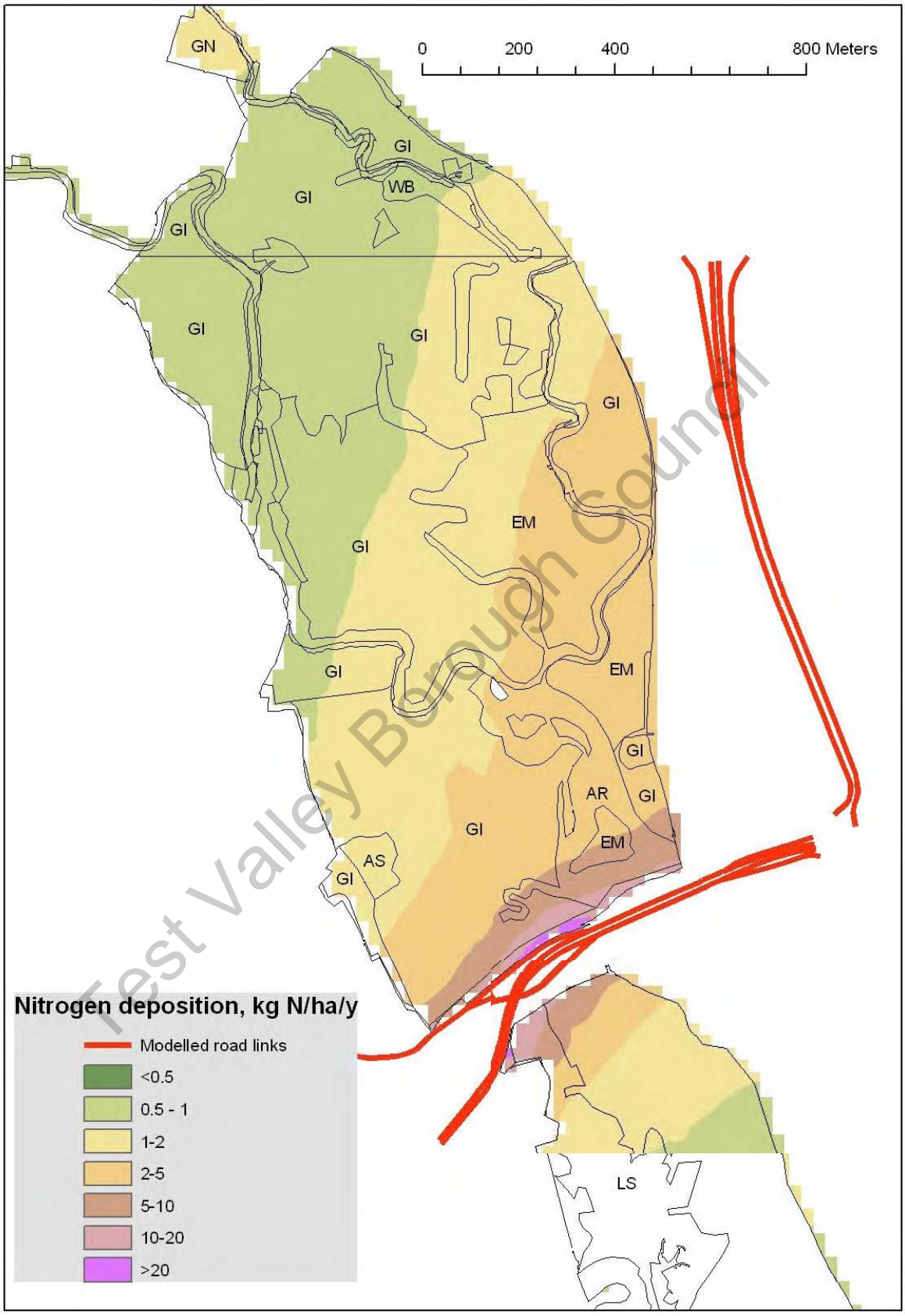
9.18 The site's qualifying features include a range of habitats and vegetation communities. Of these qualifying features, Atlantic salt meadow is the only habitat likely to be present within 200m of the affected road network. The Solent and Southampton Water Ramsar site is also within this 200m zone. While Ramsar sites do not have published conservation objectives, the Ramsar site notification sheet[46] identifies a range of vegetation communities associated with estuary areas, including saltmarsh, as part of the designation.

9.19 A study carried out for the Partnership for Urban South Hampshire (PUSH) in 2007 to examine the atmospheric pollution effects of growth planned within the South Hampshire Sub Regional Strategy on nationally and internationally important nature conservation sites[47] used a dispersion model to predict the contribution from roads to concentrations of oxides of nitrogen and ammonia and the rates of nutrient nitrogen and acid deposition in such sites. The model also predicted the additional contribution in 2026 resulting from traffic associated with growth generated by development in the PUSH area. Due to conflicting forecasts of traffic growth from development across the area, the report assumes growth at a rate of 45% for the M271 and Redbridge Causeway, and 15% for all other modelled roads. The report did however acknowledge this is likely to be an overestimate in some cases.

9.20 Map 9.2 below shows the area of the International sites near the M271 / Redbridge Causeway, with colour shading to show current levels of nitrogen deposition across the sites. The two-letter codes relate to broad habitat types, with EM referring to 'fen, marsh and swamp'. However, further detail on habitats present can be found from Natural England, which identifies that units 1, 2 and 3 of the SSSI support saltmarsh habitats that are part of the designated features of the SAC and Ramsar site. The location of these, and their proximity to the road network is shown in Map 9.3, below.

[46] www.jncc.defra.gov.uk/pdf/RIS/UK11063.pdf

[47] AEA Technology (2010), *Road transport emissions impacts on Nature Conservation Sites*. Report to the Partnership for Urban South Hampshire



Map 9.2 – N deposition modelling (composite of maps of Lower Test Marshes and Eling to Bury Marshes SSSIs, from AEA, 2007)

Map 9.3 – SSSI units for Lower Test Valley SSSI

9.21 Data from APIS (Air Pollution Information System)[48] identifies that the critical load for nitrogen deposition for coastal saltmarsh is 20-30 kg/ha/yr. The current levels of deposition for the sections of SSSI units 2 and 3 within 200m of the M271 are between 1 and 5 kg/ha/yr. Therefore it is considered that any increases to road traffic arising from policies that would result in an increase in road transport along this route would not result in an increase in nitrogen deposition to the extent that the conservation objectives of this site would be undermined.

[48] http://www.apis.ac.uk/search-pollutant-impacts

9.22 A very small section of unit 1, to the immediate north of the A35 Redbridge Flyover is possibly exceeding the critical loads. However, habitat mapping from the Hampshire Biodiversity Information Centre (HBIC) as shown in Map 9.1 (above) shows that the nearest section of coastal saltmarsh is to the southwest of the Causeway, within the Eling and Bury Marshes SSSI component of the International site.

9.23 Therefore, while the majority of the designated site would not be adversely affected by potential increases in road traffic stemming from implementation of the Plan, an area of saltmarsh approximately 2 hectares in area (i.e. the area within 200m of the road (to the south west of the Redbridge Causeway / east of the A35) may potentially be affected.

9.24 However, this section is some way outside Test Valley, and away from the major road transport links between Southampton and the Borough that are likely to receive the majority of additional traffic flows (as demonstrated through text in the Local Plan DPD, for example paragraph 2.33 of the Revised Local Plan DPD that discusses the locations of facilities used by Test valley residents, and 2.67 identifying Southampton as a major destination for employment, shopping and leisure).

9.25 Additionally, it is important to consider the Plan as a whole as well as the individual elements. In consultation on Core Strategies for other Hampshire local authorities, Natural England have referred to a document at http://www.westlondonairquality.org.uk/uploads/documents/Best%20Practice%20Guide/WLA%20Best%20Practice%20Air%20Quality%20and%20Transport%20Guide%2020051.pdf that sets out measures that, where included in Local Plans could be considered to counteract adverse effects of increasing transport emissions. The three broad measures that are relevant to nature conservation:

- Behavioural measures and modal shift - reducing the amount of traffic overall;
- Traffic management - modifying traffic behaviour to control where emissions are generated;
- Emissions reduction at source - reducing the emissions level per vehicle.

9.26 Measures included at various points in the Plan cover all of these categories, which ensure development reduces traffic demand and improves public transport and non-motorised movement. In particular, Chapter 8 of the Plan sets out the Council's commitment to ensuring that sustainable transport is delivered through the plan. Part of this commitment includes the delivery of the new Park and Ride scheme at Bargain Farm (Policy T3). This is designed to specifically reduce the levels of car transport between Nursling and Southampton, which includes the route that runs past the SAC / Ramsar site.

9.27 It is therefore considered that the effects of the plan would not undermine the conservation objectives of the Solent Maritime SAC or the Solent and Southampton Water Ramsar site.

10 Habitat Regulations Assessment – Conclusions and Record

10.1 This report has set out the process and findings of the screening and assessment that has been undertaken for the Habitats Regulations Assessment of the Test Valley Borough Council Revised Local Plan DPD. It has been prepared in order to fulfil the Council's duties under Article 6(3) of the EU Habitats Directive, which requires that any plan, which is not directly connected with or necessary to the management of a European site, but would be likely to have a significant effect on such a site, either individually or in combination with other plans or projects, shall be subject to an 'appropriate assessment' of its implications for the European site in view of the site's conservation objectives. The plan-making body shall agree to the plan only after having ascertained that it will not adversely affect the integrity of the site concerned.

10.2 Using a method that reflects current best practice and advice from Natural England, the assessment has screened all 51 policies set out in the Revised Local Plan DPD. Of these, 41 policies were assessed as being not likely to have significant effects alone or in-combination on any International site as they do not give rise to effects that could affect such a site.

10.3 The following policies were screened as having a likely significant effect:

COM1, COM3, COM4, COM5, LE3, LE4, LE5, LE6, LHW2 and T3

10.4 The following effects were considered to potentially affect the designated sites:

- Habitat deterioration through increasing recreational pressure;
- Habitat deterioration through decreasing water resource availability;
- Habitat deterioration through reduction in water quality;
- Habitat deterioration and loss through construction impacts; and
- Habitat deterioration through increasing road traffic emissions.

10.5 An Appropriate Assessment was carried out of the Revised Local Plan DPD with respect to giving further detailed consideration of the potential for these effects to flow from implementation of the identified policies within the Plan and affect the designated sites. Where the effects of the Plan as it stands (unmodified by subsequent recommendations drawn out of the Assessment) are identified as potentially undermining any conservation objectives, consideration was given to how these effects will avoided or otherwise counteracted, and where there is uncertainty, how this would be addressed.

10.6 The findings of the Appropriate Assessment are set out in Table 10.1, below.

10.7 In conclusion, provided that the Plan is modified as recommended, with respect to effects flowing from COM1 and COM4 regarding recreational impacts on Emer Bog SAC and from COM1 regarding habitat deterioration affecting Mottisfont Bats SAC, it is demonstrated that the Revised Local Plan DPD will not adversely affect any sites of International importance for nature conservation.

Table 10.1 – Record of Appropriate Assessment Findings

Source (Policy)	Receptor (Site)	Pathway	Screening assessment for likely significant effect	Can it be concluded that the effects flowing from the Plan will not affect the site?	Can the Plan be modified to ensure the conservation objectives for the sites will not be undermined, ensuring no adverse effect on the sites?
COM1 - Housing Provision	Emer Bog SAC	Recreational use of site	Degradation of qualifying habitat through change to site management regime	Yes – through the amended wording of the policy as well as the on-going research in to resident's use of informal recreational open space.	N/A
		Reduction in water resource	Degradation of habitat through decreased water resource	Yes – the Plan specifically recognises that there is no likelihood of increasing abstraction.	N/A
		Reduction in water quality	Degradation of habitat through increased nutrient input	Yes – there are no discharge points from sewage works within the zone of discharge constraint. Only agricultural sources have been identified as presenting a specific concern	N/A
	Mottisfont Bats SAC	Loss of habitat though construction	Permanent loss of off-site habitat used by barbastelle bats, including severing of ecological linkages / flyways	Yes – additional text in policy supporting text, together with existing Development Management tools to enable proper assessment.	N/A
		Reduction in	Deterioration of habitat	Yes – the Plan specifically recognises	N/A

Source (Policy)	Receptor (Site)	Pathway	Screening assessment for likely significant effect	Can it be concluded that the effects flowing from the Plan will not affect the site?	Can the Plan be modified to ensure the conservation objectives for the sites will not be undermined, ensuring no adverse effect on the sites?
		water resource	through reduction in groundwater	that there is no likelihood of increasing abstraction.	
	New Forest SPA / Ramsar	Recreational use of site	Loss of available habitat through increased levels of disturbance	Yes – through consideration of likely numbers of additional visitors, and provision of alternative greenspace	N/A
	River Itchen SAC	Reduction in water resource	Habitat loss and degradation through reduction in flows and increased sedimentation	Yes – the Plan specifically recognises that there is no likelihood of increasing abstraction.	N/A
		Reduction in water quality	Habitat loss and degradation through reduction in flows and increased sedimentation	Yes – only small area of the Borough would potentially discharge into the SAC, and the Plan specifically includes a policy relating to water management identifying that development must not cause deterioration of the status of water bodies.	N/A
	Solent Maritime SAC	Atmospheric pollution	Degradation of habitat through nutrient enrichment from airborne pollutants	Yes – there are no SAC qualifying habitats within 200m of the road network experiencing most traffic increases; the Local Plan DPD also includes measures to address air	N/A

Source (Policy)	Receptor (Site)	Pathway	Screening assessment for likely significant effect	Can it be concluded that the effects flowing from the Plan will not affect the site?	Can the Plan be modified to ensure the conservation objectives for the sites will not be undermined, ensuring no adverse effect on the sites?
				quality issues, including Policy T3, designed to reduce road traffic along this section of the network.	
	Solent and Southampton Water SPA / Ramsar	Increased recreational disturbance	Habitat loss (on-site and off-site supporting habitats)	Yes – through consideration of likely numbers of additional visitors, and provision of alternative greenspace	N/A
COM3 - New Neighbour-hood at Whitenap, Romsey	Emer Bog SAC	Recreational use of site	Degradation of habitat through changes to management regime	Yes – Additional text in Policy, together with new strategic alternative open space and on-going programme of research in to residents' use of open space for informal recreation.	N/A
	Mottisfont Bats SAC	Loss of habitat though construction	Permanent loss of off-site habitat used by barbastelle bats, including severing of ecological linkages / flyways	Yes – no habitats associated with the SAC are present within the allocation site and within the 7.5km consultation zone around the SAC	N/A
	New Forest SPA	Recreational	Loss of available habitat through increased levels	Yes – through consideration of likely numbers of additional visitors,	N/A

Source (Policy)	Receptor (Site)	Pathway	Screening assessment for likely significant effect	Can it be concluded that the effects flowing from the Plan will not affect the site?	Can the Plan be modified to ensure the conservation objectives for the sites will not be undermined, ensuring no adverse effect on the sites?
	/ Ramsar	use of site	of disturbance	provision of new strategic alternative open space	
	Solent Maritime SAC	Atmospheric pollution	Degradation of habitat through nutrient enrichment from airborne pollutants	Yes – there are no SAC qualifying habitats within 200m of road network experiencing most traffic increases; the Local Plan also includes measures to address air quality issues, including T3, designed to reduce traffic along this section of the road network.	N/A
	Solent and Southampton Water SPA / Ramsar	Increased recreational disturbance	Habitat loss (on-site and off-site supporting habitats)	Yes – through consideration of likely numbers of additional visitors, provision of new strategic alternative open space	N/A
COM4 - New Neighbour-hood at Hoe Lane, North Baddesley	Emer Bog SAC	Recreational use of site	Degradation of habitat through change to site management regime	Yes – Additional text in Policy, together with new strategic alternative open space and on-going programme of research in to residents' use of open space for informal recreation.	N/A
	New Forest SPA / Ramsar	Recreational use of site	Loss of available habitat through increased levels of disturbance	Yes – through consideration of likely numbers of additional visitors, provision of new strategic alternative open space	N/A

Source (Policy)	Receptor (Site)	Pathway	Screening assessment for likely significant effect	Can it be concluded that the effects flowing from the Plan will not affect the site?	Can the Plan be modified to ensure the conservation objectives for the sites will not be undermined, ensuring no adverse effect on the sites?
	Solent Maritime SAC	Atmospheric pollution	Degradation of habitat through nutrient enrichment from airborne pollutants	Yes – there are no qualifying habitats within 200m of the roads experiencing most traffic increases; the Plan also includes measures to address air quality issues, including Policy T3, designed to reduce traffic along this section of the network.	N/A
	Solent and Southampton Water SPA / Ramsar	Increased recreational disturbance	Habitat loss (on-site and off-site supporting habitats)	Yes – through consideration of likely numbers of additional visitors, provision of new strategic alternative open space	N/A
COM5 - Residential Development at Park Farm, Stoneham	Emer Bog SAC	Recreational use of site	Degradation of habitat through change to site management regime	Yes – the allocation site is approximately 5.5km from the SAC, outside the likely visitor catchment.	N/A
	Solent Maritime SAC	Atmospheric pollution	Degradation of habitat through nutrient enrichment from airborne pollutants	Yes – there are no qualifying habitats within 200m of the road network experiencing most traffic increases; the Plan also includes measures to address air quality issues, including T3, designed to reduce road traffic	N/A

Source (Policy)	Receptor (Site)	Pathway	Screening assessment for likely significant effect	Can it be concluded that the effects flowing from the Plan will not affect the site?	Can the Plan be modified to ensure the conservation objectives for the sites will not be undermined, ensuring no adverse effect on the sites?
				along this section of the network.	
	Solent and Southampton Water SPA / Ramsar	Increased recreational disturbance	Habitat loss (on-site and off-site supporting habitats)	Yes – through consideration of likely numbers of additional visitors and provision of alternative greenspace	N/A
LE3 - Land at Whitenap, Romsey	Solent Maritime SAC	Atmospheric pollution	Degradation of habitat through nutrient enrichment from airborne pollutants	Yes – there are no qualifying habitats within 200m of the road network experiencing most traffic increases; the Plan also includes measures to address air quality issues, including T3, designed to reduce road traffic along this section of the road network.	N/A
	Solent and Southampton Water Ramsar	Atmospheric pollution	Degradation of habitat		
LE4 - Land south of Brownhill Way, Nursling	Solent Maritime SAC	Atmospheric pollution	Degradation of habitat through nutrient enrichment from airborne pollutants	Yes – there are no qualifying habitats within 200m of the road network experiencing most traffic increases; the Local Plan DPD also includes measures to address air quality issues, including Policy T3, designed to reduce road traffic along this section of the road network.	N/A
	Solent and Southampton	Atmospheric pollution	Degradation of habitat		

Source (Policy)	Receptor (Site)	Pathway	Screening assessment for likely significant effect	Can it be concluded that the effects flowing from the Plan will not affect the site?	Can the Plan be modified to ensure the conservation objectives for the sites will not be undermined, ensuring no adverse effect on the sites?
	Water Ramsar				
LE5 - Land at Bargain Farm, Nursling	Solent Maritime SAC	Atmospheric pollution	Degradation of habitat through nutrient enrichment from airborne pollutants	Yes – there are no qualifying habitats within 200m of the road network experiencing most traffic increases; the Local Plan DPD also includes measures to address air quality issues, including Policy T3, designed to reduce road traffic along this section of the road network.	N/A
	Solent and Southampton Water Ramsar	Atmospheric pollution	Degradation of habitat		
LE6 - Land at Adanac Park, Nursling	Solent Maritime SAC	Atmospheric pollution	Degradation of habitat through nutrient enrichment from airborne pollutants	Yes – there are no qualifying habitats within 200m of the road network experiencing most traffic increases; the Local Plan DPD also includes measures to address air quality issues, including Policy T3, designed to reduce road traffic along this section of the road network.	N/A
	Solent and Southampton Water Ramsar	Atmospheric pollution	Degradation of qualifying habitat		
LHW3 - Ganger Farm	Mottisfont Bats SAC	Loss of habitat though construction	Permanent loss of off-site habitat used by barbastelle bats, including severing of ecological linkages /	Yes – the policy recognises the presence of the SAC and requires that the proposals to construct and operate the sports facility at Ganger Farm would ensure that impacts are	N/A

Source (Policy)	Receptor (Site)	Pathway	Screening assessment for likely significant effect	Can it be concluded that the effects flowing from the Plan will not affect the site?	Can the Plan be modified to ensure the conservation objectives for the sites will not be undermined, ensuring no adverse effect on the sites?
			flyways	avoided	
T3 - Park and Ride, Nursling	Solent and Southampton Water SPA / Ramsar	Increased recreational disturbance	Habitat loss (on-site and off-site supporting habitats)	Yes – due to walking distance from Park and Ride facility and lack of safe footpaths.	N/A

11 List of Abbreviations

cSAC	Candidate Special Area of Conservation
DPD	Development Plan Document
HRA	Habitat Regulations Assessment
JNCC	Joint Nature Conservation Committee
LDF	Local Development Framework
RoC	Review of Consent
pSAC	Potential' or 'Possible' Special Area of Conservation
pSPA	Proposed Special Protection Area
PUSH	Partnership for Urban South Hampshire
SAC	Special Area of Conservation
SMP	Shoreline Management Plan
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
TVBC	Test Valley Borough Council

Appendix 1: Revised Local Plan Policy References

Policy Name Summary	Reference in Reg 19 Revised Local Plan DPD	Reference in Reg 18 Revised Local Plan	Reference in Core Strategy Reg 25 (Jan 2012)
Housing Provision 2011-2029	COM1	COM1	COM2
Settlement Hierarchy	COM2	COM2	COM1
New Neighbourhood at Whitenap, Romsey	COM3	COM3	COM3
New Neighbourhood at Hoe Lane, North Baddesley	COM4	COM4	COM4
Residential Development at Park Farm, Stoneham	COM5	COM5	-
New Neighbourhood at Picket Piece, Andover	COM6	COM6	COM5
New Neighbourhood at Picket Twenty, Andover	COM6A		
Affordable Housing	COM7	COM7	COM6
Rural Exception Affordable Housing	COM8	COM8	COM7
Community Led Development	COM9	COM9	COM8
Occupation Accommodation for Rural Workers in the Countryside	COM10	COM10	COM9
Existing Dwellings and Ancillary Domestic Buildings in the Countryside	COM11	COM11	COM10
Replacement Dwellings in the Countryside	COM12	COM12	-
Gypsies, Travellers and Travelling Showpeople	COM13	COM13	COM11
Community Services & Facilities	COM14	COM14	COM12
Infrastructure	COM15	COM15	COM13
University of Southampton Science Park	LE1	LE1	LE6
South of Benham Campus	LE2	LE2	-

Policy Name Summary	Reference in Reg 19 Revised Local Plan DPD	Reference in Reg 18 Revised Local Plan	Reference in Core Strategy Reg 25 (Jan 2012)
Land at Whitenap, Romsey	LE3	LE3	LE11
Land south of Brownhill Way, Nursling	LE4	LE4	LE9
Land at Bargain Farm, Nursling	LE5	LE5	LE10
Land at Adanac Park, Nursling	LE6	LE6	LE7
Nursling Estate	LE7	LE7	LE8
Extension to Walworth Business Park	LE8	LE8	LE4
Andover Airfield Business Park	LE9	LE9	LE5
Retention of Employment Land & Strategic Employment Sites	LE10	LE10	LE1
Main Town Centre Uses	LE11	LE11	LE13
Ground Floor Uses in Romsey	LE12	LE12	LE14
Ground Floor Uses in Andover	LE13	LE13	LE15
Mixed Development at George Yard / Black Swan Yard	LE14	LE14	LE16
Stockbridge Local Centre	LE15	LE15	-
Re-Use of Buildings in the Countryside	LE16	LE16	LE2
Employment Sites in the Countryside	LE17	LE17	LE3
Tourism	LE18	LE18	LE12
High Quality Development in the Borough	E1	E1	E1
Landscape Character of the Borough	E2	E2	E2
Local Gap	E3	E3	E3
Residential Areas of Special Character	E4	E4	E5
Biodiversity	E5	E5	E6

Policy Name Summary	Reference in Reg 19 Revised Local Plan DPD	Reference in Reg 18 Revised Local Plan	Reference in Core Strategy Reg 25 (Jan 2012)
Green Infrastructure	E6	E6	-
Water Management	E7	E7	E7
Pollution	E8	E8	-
Heritage	E9	E9	-
Public Open Space	LHW1	LHW1	LHW1
Ganger Farm	LHW2	LHW3	LHW3
Forest Park	LHW3	LHW2	LHW2
Amenity	LHW4	LHW4	LHW4
Managing Movement	T1	T1	T1
Parking Standard	T2	T2	T2
Park and Ride, Nursling	T3	T3	T3
Community Safety	CS1	CS1	CS1
Skills & Training	ST1	ST1	-

Appendix 2 – List of plans and projects considered during in-combination assessment

Note: Work on all Local Development Frameworks is deemed to be important in relation to the in combination assessment, however, not all the relevant documents have been identified individually within the table below, which is intended to act as a summary of the main plans and projects.

Project / Plan	Summary / Key Objectives	Implications for the Test Valley DPDs	Implications for the HRA
Hampshire, Portsmouth, Southampton, New Forest and South Downs Minerals and Waste Plan , 2013	. It proposes a range of policies and identifies sites to ensure sufficient supply of minerals and waste treatment capacity over the plan period and to enable the determination of mineral and waste planning applications.	This document forms part of the Development Plan for Test Valley and will be taken into account in decision making. It proposes a number of sites within Test Valley for both mineral and waste purposes.	The proposals within this document would need to be taken into account as part of the in combination consideration. This has been assessed against the Habitat Regulations.
Hampshire Local Transport Plan 2011 – 2031, Hampshire County Council, 2011	This document sets out a long term strategy and a shorter term implementation plan to support delivery. It sets out that the car is anticipated to remain the dominant form of travel, so the strategy has taken this into account.	The DPDs should accord with this strategy. It also provides a framework for looking at highway infrastructure capacity.	The main implication through this plan relates to air quality impacts of traffic on designated sites.
Water Resource Management Plan 2010 - 2035, Southern Water, 2009	This identifies how water resources will be managed up to 2035 to ensure sufficient water supply is available. This allows for forecast changes in population. A number of changes are proposed, including universal metering and changes to the sources of water supply within	It will be important to ensure that any proposals coming forward through the DPDs will take account of infrastructure and resource availability – this includes the need to carefully consider water resources and demand management.	This plan has taken account of implications on designated sites, of most relevance in this case to the River Itchen SAC. Changes are proposed to licensing to reduce abstraction from the River Itchen based on implications on the SAC, with proposed increases in abstraction from the River Test

Project / Plan	Summary / Key Objectives	Implications for the Test Valley DPDs	Implications for the HRA
	the area.		offset the reduced water availability from the Itchen.
Water Resource Plan, Bournemouth and West Hampshire Water (now Sembcorp Bournemouth Water), 2009	This document seeks to ensure that sufficient water resources are available for this area accounting for changes in population.	This plan covers a small area towards the west of the Borough in terms of water supply. It will be important to ensure that any proposals coming forward take account of the availability of infrastructure and resources.	This is particularly relevant to the River Avon which falls within this water resource area. It is also relevant to the New Forest designations in terms of the supply of water to this area.
Biodiversity Action Plan for Hampshire, Hampshire Biodiversity Partnership, 1998	This document sets out action plans for the conservation and enhancement of biodiversity. It identifies habitats and species of priority concern.	The LDF will need to take account of the biodiversity within the Borough and beyond that could be affected, particularly in relation to the priority species and habitats	The protection of biodiversity can act as a form of mitigation for designated features of interest.
Neighbouring and nearby authorities' Development Plans including: ▪ New Forest District ▪ New Forest National Park ▪ Southampton City ▪ Eastleigh Borough ▪ Winchester ▪ Basingstoke and Deane ▪ Wiltshire ▪ West Berkshire ▪ Other PUSH authorities and authorities to the west of the New Forest	Various planning documents (including Core Strategies and Local Plans) which provide the framework for decision making in each local authority area and provide allocations / safeguarding areas for development.	There is a need to work with these authorities to ensure a joined up approach to planning and development (including infrastructure availability).	There is a need to account for the new development proposed within these (and forthcoming) plans and the pressures they may result in, including recreational and air quality implications.

Project / Plan	Summary / Key Objectives	Implications for the Test Valley DPDs	Implications for the HRA
New Forest National Park Management Plan 2010 – 2015, New Forest National Park Authority, 2010	The role of the plan is to guide and co-ordinate activities by those helping to deliver the purpose of the National Park. It highlights the need to work together and provides more detail on specific areas for action.	This plan supports the principle of new countryside recreation outside the National Park. It also highlights the need for joint working.	The plan gives consideration to the enhancement of habitats within the National Park, including proposals to undertake additional research on the cumulative impacts of development.
New Forest National Park Recreation Management Strategy 2010 – 2030, New Forest National Park Authority, 2010	This establishes the long term approach to the management of recreation within the national park; this involves balancing the recreational use with other purposes of the area including the conservation of species and habitats.	This plan highlights the importance of joint working, including with neighbouring authorities.	The appropriate management of recreation particularly within the more vulnerable locations has the potential to reduce the pressure on designated features of interest. This includes measures within the National Park and working with authorities / organisations outside the National Park.
New Forest Abstraction Licensing Strategy, Environment Agency, 2013	This establishes the approach to managing abstraction.	No direct implications on Test Valley given the area to which this document relates.	May be of relevance in terms of the impact on the New Forest designations.
Hampshire Avon WFD Management Area Abstraction Licensing Strategy, Environment Agency, 2012	This establishes the approach to managing abstraction.	This document covers a small area towards the west of the Borough. The approach laid out will need to be taken into consideration in terms of water availability.	This is relevant to a number of designations including the River Avon and New Forest designations.

Project / Plan	Summary / Key Objectives	Implications for the Test Valley DPDs	Implications for the HRA
Test and Itchen Abstraction Licensing Strategy , Environment Agency, 2013	This establishes the approach to managing abstraction. Most of the area is identified as having restricted water available for further abstraction and moderate and low flows.	This document covers the majority of the Borough and is relevant in terms of the availability of water to serve any increase in demand through rising population.	This is relevant for a number of designations in terms of the water availability for the environment – this includes the River Itchen and the Solent designations. This should also be considered in relation to the Environment Agency's Review of Consent work.
East Hampshire Abstraction Licensing Strategy, Environment Agency, 2013	This establishes the approach to managing abstraction. Part of the area is underlain by chalk with other areas more responsive to rainfall.	No direct implications on Test Valley given the area to which this document relates.	This is relevant to the Solent designations, particularly in terms of the quantity of water entering the system but also has implications in terms of water quality.
Managing Flood Risk: Test and Itchen Catchment Flood Management Plan, Environment Agency, 2008	This document gives an overview of the flood risk in the Test and Itchen catchments and develops a policy approach to the management of flood risk based on identified policy units.	There is a need to account for levels of flood risk and the policy approaches for the future to inform sustainable development proposals.	This is relevant to the Solent designations and Emer Bog in terms of both the quantity and quality of water entering the systems.
North Solent Shoreline Management Plan, New Forest District Council, 2010	This document sets out the strategic policy approach to the management of the coastline and adjacent areas at risk of tidal flooding and coastal erosion.	A small part of the Borough is covered by this document (unit 5c13) for which an approach of 'no active intervention' is identified. It will be important to take account of this to ensure that there is no inappropriate development in this area.	The management of the North Solent shoreline is likely to significantly impact on the Solent designations, particularly in terms of the movement of habitats in relation to climate change and sea level rise. Through the HRA for this plan there are proposals for habitat creation to offset the potential losses.

Project / Plan	Summary / Key Objectives	Implications for the Test Valley DPDs	Implications for the HRA
Solent European Marine Site (SEMS) Management Scheme and Update, 2004 and 2011	These documents intent to promote the sustainable use of the Solent area in a way that does not threaten the nature conservation interest.	Need to be aware of the implications of this document for the preparation of the DPDs.	The common approach provided to the management of this area has the potential to reduce effects on the designation.
Strategic Guidance for the Solent, Solent Forum, last updated in 2011	This guidance aims to provide a general approach for the whole Solent in terms of strategic planning and management, it also aims to raise awareness and understanding of the main issues.	Need to be aware of the details and action points within this document and work with the Solent Forum as appropriate.	This document provides a source of information which has a role to play in the management of the Solent, including the designated areas. The chapter on water based recreation was updated in 2011.
Solent Disturbance and Mitigation Project, co-ordinated by Solent Forum, on-going	This project aims to provide a greater understanding of the recreation pressures on the Solent designations, particularly in terms of the bird species for which the SPA is designated. There are a number of phases to the project – modelling work has been completed and the next phase related to mitigation. This project is currently subject to a peer review by Natural England.	The Test Valley DPDs may have a role in delivering mitigation (if required) to reduce in-combination pressures. The specific implications will depend on the final outcomes of the project.	This work provides a source of evidence to inform the HRA work, including whether there are significant effects and if so, what would be appropriate mitigation.
Solent Wader and Brent Goose Strategy, 2010	This strategy provides evidence and recommendations to inform planning and projects in relation to possible effects on the Brent Goose and wader populations within the Solent coast.	The strategy identifies areas within the Borough that are important to waders and the Brent Goose population. This needs to be taken into account planning for the area, along with	This work provides a source of evidence to inform the HRA work, which will help inform consideration of potential effects on the Solent and Southampton Water SPA and Ramsar site.

Project / Plan	Summary / Key Objectives	Implications for the Test Valley DPDs	Implications for the HRA
		the recommendations within the strategy.	
Southampton Airport Master Plan, BAA Southampton, 2006	This document looks at the changes expected to Southampton Airport up to 2030. Passenger numbers are expected to rise at a greater rate than the number of flights.	This may result in additional traffic, particularly along strategic road networks.	The increase in number of aircraft movements has the potential to increase disturbance to species of interest in the designated sites nearby and on the flight paths.
PUSH Green Infrastructure Strategy, 2010	The purpose of this strategy is to document existing green infrastructure and identify options for additions and enhancements across the South Hampshire area.	There are projects within this strategy that relate to Test Valley, which DPDs may have a role in implementing.	The projects set out within this strategy need to be considered in-combination with other plans and projects.
Outstanding / Partially Implemented Planning Permissions including: ▪ 800 dwellings at Abbotswood, Romsey ▪ Up to 350 dwellings at Redbridge Lane, Nursling ▪ Employment development at Adanac Park, Nursling ▪ 2,500 dwellings at East Anton / Augusta Park, Andover ▪ 1,200 dwellings at Picket Twenty, Andover ▪ Up to 530 dwellings at Picket Piece, Andover ▪ 43 (net) dwellings at Nutburn Road, North Baddesley	Range of planning permission (some partially implemented) that result in additional development within the locality. There are other applications that are currently under consideration that may also be relevant.	These schemes are considered in conjunction with the proposals within the Local Plan – the listed residential proposals contribute to the proposed housing requirement for the plan period.	These proposals need to be considered in-combination with other plans and projects. Where appropriate they were subject to HRA in advance of the determination of the applications.